Nos. 00-511, 00-555, 00-587, 00-590 and 00-602

IN THE

Supreme Court of the United States

OCTOBER TERM, 2000

VERIZON COMMUNICATIONS INC., *ET AL.*,
Petitioners,

v.

FEDERAL COMMUNICATIONS COMMISSION AND THE UNITED STATES OF AMERICA, *ET AL.*,
Respondents.

On Writs of Certiorari to the United States Court of Appeals for the Eighth Circuit

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FCC 96-325

Before the
Federal Communications Commission
Washington, DC 20554

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	)	
Implementation of the Local Competition Provisions in the Telecommunications Act of 1996	)	CC Docket No. 96-98
	)	
	)	
Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers	)	CC Docket No. 95-185
	)	
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FIRST REPORT AND ORDER

Adopted: August 1, 1996 Released: August 8, 1996

By the Commission: Chairman Hundt and Commissioners Quello, Ness, and Chong issuing separate statements.

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I. INTRODUCTION, OVERVIEW, AND EXECUTIVE SUMMARY

A. The Telecommunications Act of 1996 - A New Direction

1. The Telecommunications Act of 1996[1] fundamentally changes telecommunications regulation. In the old regulatory regime government encouraged monopolies. In the new regulatory regime, we and the states remove the outdated barriers that protect monopolies from competition and affirmatively promote efficient competition using tools forged by Congress. Historically, regulation of this industry has been premised on the belief that service could be provided at the lowest cost to the maximum number of consumers through a regulated monopoly network. State and federal regulators devoted their efforts over many decades to regulating the prices and practices of these monopolies and protecting them against competitive entry. The 1996 Act adopts precisely the opposite approach. Rather than shielding telephone companies from competition, the 1996 Act requires telephone companies to open their networks to competition.

2. The 1996 Act also recasts the relationship between the FCC and state commissions responsible for regulating telecommunications services. Until now, we and our state counterparts generally have regulated the jurisdictional segments of this industry assigned to each of us by the Communications Act of 1934. The 1996 Act forges a new partnership between state and federal regulators. This arrangement is far better suited to the coming world of competition in which historical regulatory distinctions are supplanted by competitive forces. As this Order demonstrates, we have benefitted enormously from the expertise and experience that the state commissioners and their staffs have contributed to these discussions. We look forward to the continuation of that cooperative working relationship in the coming months as each of us carries out the role assigned by the 1996 Act.

3. Three principal goals established by the telephony provisions of the 1996 Act are: (1) opening the local exchange and exchange access markets to competitive entry; (2) promoting increased competition in telecommunications markets that are already open to competition, including the long distance services market; and (3) reforming our system of universal service so that universal service is preserved and advanced as the local exchange and exchange access markets move from monopoly to competition. In this rulemaking and related proceedings, we are taking the steps that will achieve the pro-competitive, deregulatory goals of the 1996 Act. The Act directs us and our state colleagues to remove not only statutory and regulatory impediments to competition, but economic and operational impediments as well. We are directed to remove these impediments to competition in all

[1] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, *to be codified at* 47 U.S.C. §§ 151 *et. seq.* Hereinafter, all citations to the 1996 Act will be to the 1996 Act as codified in the United States Code unless otherwise indicated.

telecommunications markets, while also preserving and advancing universal service in a manner fully consistent with competition.

4. These three goals are integrally related. Indeed, the relationship between fostering competition in local telecommunications markets and promoting greater competition in the long distance market is fundamental to the 1996 Act. Competition in local exchange and exchange access markets is desirable, not only because of the social and economic benefits competition will bring to consumers of *local* services, but also because competition eventually will eliminate the ability of an incumbent local exchange carrier to use its control of bottleneck local facilities to impede free market competition. Under section 251, incumbent local exchange carriers (LECs), including the Bell Operating Companies (BOCs), are mandated to take several steps to open their networks to competition, including providing interconnection, offering access to unbundled elements of their networks, and making their retail services available at wholesale rates so that they can be resold. Under section 271, once the BOCs have taken the necessary steps, they are allowed to offer long distance service in areas where they provide local telephone service, if we find that entry meets the specific statutory requirements and is consistent with the public interest. Thus, under the 1996 Act, the opening of one of the last monopoly bottleneck strongholds in telecommunications -- the local exchange and exchange access markets -- to competition is intended to pave the way for enhanced competition in *all* telecommunications markets, by allowing all providers to enter all markets. The opening of all telecommunications markets to all providers will blur traditional industry distinctions and bring new packages of services, lower prices and increased innovation to American consumers. The world envisioned by the 1996 Act is one in which all providers will have new competitive opportunities as well as new competitive challenges.

5. The Act also recognizes, however, that universal service cannot be maintained without reform of the current subsidy system. The current universal service system is a patchwork quilt of implicit and explicit subsidies. These subsidies are intended to promote telephone subscribership, yet they do so at the expense of deterring or distorting competition. Some policies that traditionally have been justified on universal service considerations place competitors at a disadvantage. Other universal service policies place the incumbent LECs at a competitive disadvantage. For example, LECs are required to charge interexchange carriers a Carrier Common Line charge for every minute of interstate traffic that any of their customers send or receive. This exposes LECs to competition from competitive access providers, which are not subject to this cost burden. Hence, section 254 of the Act requires the Commission, working with the states and consumer advocates through a Federal/State Joint Board, to revamp the methods by which universal service payments are collected and disbursed.[2] The present universal service system is incompatible with the statutory mandate to introduce efficient competition into local markets, because the current system distorts competition in

[2] *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Notice of Proposed Rulemaking *and Order Establishing Joint Board*, FCC 96-93 (rel. Mar. 8, 1996) (*Universal Service NPRM*).

those markets. For example, without universal service reform, facilities-based entrants would be forced to compete against monopoly providers that enjoy not only the technical, economic, and marketing advantages of incumbency, but also subsidies that are provided only to the incumbents.

B. The Competition Trilogy: Section 251, Universal Service Reform and Access Charge Reform

6. The rules that we adopt to implement the local competition provisions of the 1996 Act represent only one part of a trilogy. In this Report and Order, we adopt initial rules designed to accomplish the first of the goals outlined above -- opening the local exchange and exchange access markets to competition. The steps we take today are the initial measures that will enable the states and the Commission to begin to implement sections 251 and 252. Given the dynamic nature of telecommunications technology and markets, it will be necessary over time to review proactively and adjust these rules to ensure both that the statute's mandate of competition is effectuated and enforced, and that regulatory burdens are lifted as soon as competition eliminates the need for them. Efforts to review and revise these rules will be guided by the experience of states in their initial implementation efforts.

7. The second part of the trilogy is universal service reform. In early November, the Federal/State Universal Service Joint Board, including three members of this Commission, will make its recommendations to the Commission. These recommendations will serve as the cornerstone of universal service reform. The Commission will act on the Joint Board's recommendations and adopt universal service rules not later than May 8, 1997, and, we hope, even earlier. Our universal service reform order, consistent with section 254, will rework the subsidy system to guarantee affordable service to all Americans in an era in which competition will be the driving force in telecommunications. By reforming the collection and distribution of universal service funds, the states and the Commission will also ensure that the goals of affordable service and access to advanced services are met by means that enhance, rather than distort, competition. Universal service reform is vitally connected to the local competition rules we adopt today.

8. The third part of the trilogy is access charge reform. It is widely recognized that, because a competitive market drives prices to cost, a system of charges which includes non-cost based components is inherently unstable and unsustainable. It also well-recognized that access charge reform is intensely interrelated with the local competition rules of section 251 and the reform of universal service. We will complete access reform before or concurrently with a final order on universal service.

9. Only when all parts of the trilogy are complete will the task of adjusting the regulatory framework to fully competitive markets be finished. Only when our counterparts at the state level complete implementing and supplementing these rules will the complete

blueprint for competition be in place. Completion of the trilogy, coupled with the reduction in burdensome and inefficient regulation we have undertaken pursuant to other provisions of the 1996 Act, will unleash marketplace forces that will fuel economic growth. Until then, incumbents and new entrants must undergo a transition process toward fully competitive markets. We will, however, act quickly to complete the three essential rulemakings. We intend to issue a notice of proposed rulemaking in 1996 and to complete the access charge reform proceeding concurrently with the statutory deadline established for the section 254 rulemaking. This timetable will ensure that actions taken by the Joint Board in November and this Commission by not later than May 1997 in the universal service reform proceeding will be coordinated with the access reform docket.

C. Economic Barriers

10. As we pointed out in our Notice of Proposed Rulemaking in this docket[3], the removal of statutory and regulatory barriers to entry into the local exchange and exchange access markets, while a necessary precondition to competition, is not sufficient to ensure that competition will supplant monopolies. An incumbent LEC's existing infrastructure enables it to serve new customers at a much lower incremental cost than a facilities-based entrant that must install its own switches, trunking and loops to serve its customers.[4] Furthermore, absent interconnection between the incumbent LEC and the entrant, the customer of the entrant would be unable to complete calls to subscribers served by the incumbent LEC's network. Because an incumbent LEC currently serves virtually all subscribers in its local serving area,[5] an incumbent LEC has little economic incentive to assist new entrants in their efforts to secure a greater share of that market. An incumbent LEC also has the ability to act on its incentive to discourage entry and robust competition by not interconnecting its network with the new entrant's network or by insisting on supracompetitive prices or other unreasonable conditions for terminating calls from the entrant's customers to the incumbent LEC's subscribers.

11. Congress addressed these problems in the 1996 Act by mandating that the most significant economic impediments to efficient entry into the monopolized local market must be removed. The incumbent LECs have economies of density, connectivity, and scale; traditionally, these have been viewed as creating a natural monopoly. As we pointed out in our NPRM, the local competition provisions of the Act require that these economies be shared

[3] *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, Notice of Proposed Rulemaking, FCC 96-182 (rel. Apr. 19, 1996), 61 Fed. Reg. 18311 (Apr. 25, 1996) (NPRM).

[4] *See* NPRM at para. 6.

[5] *See* NPRM at n.13.

with entrants. We believe they should be shared in a way that permits the incumbent LECs to maintain operating efficiency to further fair competition, and to enable the entrants to share the economic benefits of that efficiency in the form of cost-based prices.[6] Congress also recognized that the transition to competition presents special considerations in markets served by smaller telephone companies, especially in rural areas.[7] We are mindful of these considerations, and know that they will be taken into account by state commissions as well.

12. The Act contemplates three paths of entry into the local market -- the construction of new networks, the use of unbundled elements of the incumbent's network, and resale. The 1996 Act requires us to implement rules that eliminate statutory and regulatory barriers and remove economic impediments to each. We anticipate that some new entrants will follow multiple paths of entry as market conditions and access to capital permit. Some may enter by relying at first entirely on resale of the incumbent's services and then gradually deploying their own facilities. This strategy was employed successfully by MCI and Sprint in the interexchange market during the 1970's and 1980's. Others may use a combination of entry strategies simultaneously -- whether in the same geographic market or in different ones. Some competitors may use unbundled network elements in combination with their own facilities to serve densely populated sections of an incumbent LEC's service territory, while using resold services to reach customers in less densely populated areas. Still other new entrants may pursue a single entry strategy that does not vary by geographic region or over time. Section 251 neither explicitly nor implicitly expresses a preference for one particular entry strategy. Moreover, given the likelihood that entrants will combine or alter entry strategies over time, an attempt to indicate such a preference in our section 251 rules may have unintended and undesirable results. Rather, our obligation in this proceeding is to establish rules that will ensure that all pro-competitive entry strategies may be explored. As to success or failure, we look to the market, not to regulation, for the answer.

13. We note that an entrant, such as a cable company, that constructs its own network will not necessarily need the services or facilities of an incumbent LEC to enable its own subscribers to communicate with each other. A firm adopting this entry strategy, however, still will need an agreement with the incumbent LEC to enable the entrant's customers to place calls to and receive calls from the incumbent LEC's subscribers.[8] Sections 251(b)(5) and (c)(2) require incumbent LECs to enter into such agreements on just, reasonable, and nondiscriminatory terms and to transport and terminate traffic originating on another carrier's network under reciprocal compensation arrangements. In this item, we adopt rules for states

[6] *See* NPRM at paras. 10-12.

[7] 47 U.S.C. § 251(f).

[8] *See infra*, Section IV.A.

to apply in implementing these mandates of section 251 in their arbitration of interconnection disputes, as well as their review of such arbitrated arrangements, or a BOC's statement of generally available terms. We believe that our rules will assist the states in carrying out their responsibilities under the 1996 Act, thereby furthering the Act's goals of fostering prompt, efficient, competitive entry.

14. We also note that many new entrants will not have fully constructed their local networks when they begin to offer service.[9] Although they may provide some of their own facilities, these new entrants will be unable to reach all of their customers without depending on the incumbent's facilities. Hence, in addition to an arrangement for terminating traffic on the incumbent LEC's network, entrants will likely need agreements that enable them to obtain wholesale prices for services they wish to sell at retail and to use at least some portions of the incumbents' facilities, such as local loops and end office switching facilities.

15. Congress recognized that, because of the incumbent LEC's incentives and superior bargaining power, its negotiations with new entrants over the terms of such agreements would be quite different from typical commercial negotiations. As distinct from bilateral commercial negotiation, the new entrant comes to the table with little or nothing the incumbent LEC needs or wants. The statute addresses this problem by creating an arbitration proceeding in which the new entrant may assert certain rights, including that the incumbent's prices for unbundled network elements must be "just, reasonable and nondiscriminatory."[10] We adopt rules herein to implement these requirements of section 251(c)(3).

D. Operational Barriers

16. The statute also directs us to remove the existing operational barriers to entering the local market. Vigorous competition would be impeded by technical disadvantages and other handicaps that prevent a new entrant from offering services that consumers perceive to be equal in quality to the offerings of incumbent LECs. Our recently-issued number portability Report and Order addressed one of the most significant operational barriers to

[9] Joint Managers' Statement, S. Conf. Rep. No. 104-230, 104th Cong., 2d Sess. 113 (1996) ("Joint Explanatory Statement") at 121.

[10] *See* 47 U.S.C.§ 251(c)(3)

competition by permitting customers to retain their phone numbers when they change local carriers.[11]

17. Closely related to number portability is dialing parity, which we address in a companion order.[12] Dialing parity enables a customer of a new entrant to dial others with the convenience an incumbent provides, regardless of which carrier the customer has chosen as the local service provider. The history of competition in the interexchange market illustrates the critical importance of dialing parity to the successful introduction of competition in telecommunications markets. Equal access enabled customers of non-AT&T providers to enjoy the same convenience of dialing "1" plus the called party's number that AT&T customers had. Prior to equal access, subscribers to interexchange carriers (IXCs) other than AT&T often were required to dial more than 20 digits to place an interstate long-distance call. Industry data show that, after equal access was deployed throughout the country, the number of customers using MCI and other long-distance carriers increased significantly.[13] Thus, we believe that equal access had a substantial pro-competitive impact. Dialing parity should have the same effect.

18. This Order addresses other operational barriers to competition, such as access to rights of way, collocation, and the expeditious provisioning of resale and unbundled elements to new entrants. The elimination of these obstacles is essential if there is to be a fair opportunity to compete in the local exchange and exchange access markets. As an example, customers can voluntarily switch from one interexchange carrier to another extremely rapidly, through automated systems. This has been a boon to competition in the interexchange market. We expect that moving customers from one local carrier to another rapidly will be essential to fair local competition.

19. As competition in the local exchange market emerges, operational issues may be among the most difficult for the parties to resolve. Thus, we recognize that, along with the state commissions and the courts, we will be called upon to enforce provisions of arbitrated agreements and our rules relating to these operational barriers to entry. Because of the critical importance of eliminating these barriers to the accomplishment of the Act's pro-competitive

[11] *Telephone Number Portability*, CC Docket No. 95-116, First Report and Order and Further Notice of Proposed Rulemaking, FCC 96-286 (rel. July 2, 1996) (*Number Portability Order*). Consistent with the 19 Act, 47 U.S.C. §251(b)(2), we required LECs to implement interim and long-term measures to ensure that customers can change their local service providers without having to change their phone number. Number portability promotes competition by making it less expensive and less disruptive for a customer to switch providers, thus freeing the customer to choose the local provider that offers the best value.

[12] NPRM paras. 202-219.

[13] Federal Communications Commission, STATISTICS OF COMMUNICATIONS COMMON CARRIERS 1994-95, at 344, Table 8.8; Federal Communications Commission, REPORT ON LONG DISTANCE MARKET SHARE, Second Quarter 1995, at 14, table 6 (Oct. 1995).

objectives, we intend to enforce our rules in a manner that is swift, sure, and effective. To this end we will review, with the states, our enforcement techniques during the fourth quarter of 1996.

20. We recognize that during the transition from monopoly to competition it is vital that we and the states vigilantly and vigorously enforce the rules that we adopt today and that will be adopted in the future to open local markets to competition. If we fail to meet that responsibility, the actions that we take today to accomplish the 1996 Act's pro-competitive, deregulatory objectives may prove to be ineffective.

E. Transition

21. We consider it vitally important to establish a "pro-competitive, deregulatory national policy framework"[14] for local telephony competition, but we are acutely mindful of existing common carrier arrangements, relationships, and expectations, particularly those that affect incumbent LECs. In light of the timing issues described above, we think it wise to provide some appropriate transitions.

22. In this regard, this Order sets minimum, uniform, national rules, but also relies heavily on states to apply these rules and to exercise their own discretion in implementing a pro-competitive regime in their local telephone markets. On those issues where the need to create a factual record distinct to a state or to balance unique local considerations is material, we ask the states to develop their own rules that are consistent with general guidance contained herein. The states will do so in rulemakings and in arbitrating interconnection arrangements. On other issues, particularly those related to pricing, we facilitate the ability of states to adopt immediate, temporary decisions by permitting the states to set proxy prices within a defined range or subject to a ceiling. We believe that some states will find these alternatives useful in light of the strict deadlines of the law. For example, section 252(b)(4)(C) requires a state commission to complete the arbitration of issues that have been referred to it, pursuant to section 252(b)(1), within nine months after the incumbent local exchange carrier received the request for negotiation. Selection of the actual prices within the range or subject to the ceiling will be for the state commission to determine. Some states may use proxies temporarily because they lack the resources necessary to review cost studies in rulemakings or arbitrations. Other states may lack adequate resources to complete such tasks before the expiration of the arbitration deadline. However, we encourage all states to complete the necessary work within the statutory deadline. Our expectation is that the bulk of interconnection arrangements will be concluded through arbitration or agreement, by the beginning of 1997. Not until then will we be able to determine more precisely the impact of this Order on promoting competition. Between now and then, we are eager to continue our work with the states. In this period, as set forth earlier, we should be able to take major steps

[14] Joint Explanatory Statement at 1.

toward implementing a new universal service system and far-reaching reform of interstate access. These reforms will reflect intensive dialogue between us and the states.

23. Similarly, as states implement the rules that we adopt in this order as well as their own decisions, they may find it useful to consult with us, either formally or informally, regarding particular aspects of these rules. We encourage and invite such inquiries because we believe that such consultations are likely to provide greater certainty to the states as they apply our rules to specific arbitration issues and possibly to reduce the burden of expensive judicial proceedings on states. A variety of formal and informal procedures exist under our rules for such consultations, and we may find it helpful to fashion others as we gain additional experience under the 1996 Act.

F. Executive Summary

1. Scope of Authority of the FCC and State Commissions

24. The Commission concludes that sections 251 and 252 address both interstate and intrastate aspects of interconnection, resale services, and access to unbundled elements. The 1996 Act moves beyond the distinction between interstate and intrastate matters that was established in the 1934 Act, and instead expands the applicability of national rules to historically intrastate issues, and state rules to historically interstate issues. In the Report and Order, the Commission concludes that the states and the FCC can craft a partnership that is built on mutual commitment to local telephone competition throughout the country, and that under this partnership, the FCC establishes uniform national rules for some issues, the states, and in some instances the FCC, administer these rules, and the states adopt additional rules that are critical to promoting local telephone competition. The rules that the FCC establishes in this Report and Order are minimum requirements upon which the states may build. The Commission also intends to review and amend the rules it adopts in this Report and Order to take into account competitive developments, states' experiences, and technological changes.

2. Duty to Negotiate in Good Faith

25. In the Report and Order, the Commission establishes some national rules regarding the duty to negotiate in good faith, but concludes that it would be futile to try to determine in advance every possible action that might be inconsistent with the duty to negotiate in good faith. The Commission also concludes that, in many instances, whether a party has negotiated in good faith will need to be decided on a case-by-case basis, in light of the particular circumstances. The Commission notes that the arbitration process set forth in section 252 provides one remedy for failing to negotiate in good faith. The Commission also concludes that agreements that were negotiated before the 1996 Act was enacted, including agreements between neighboring LECs, must be filed for review by the state commission pursuant to section 252(a). If the state commission approves such agreements, the terms of

those agreements must be made available to requesting telecommunications carriers in accordance with section 252(i).

3. Interconnection

26. Section 251(c)(2) requires incumbent LECs to provide interconnection to any requesting telecommunications carrier at any technically feasible point. The interconnection must be at least equal in quality to that provided by the incumbent LEC to itself or its affiliates, and must be provided on rates, terms, and conditions that are just, reasonable, and nondiscriminatory. The Commission concludes that the term "interconnection" under section 251(c)(2) refers only to the physical linking of two networks for the mutual exchange of traffic. The Commission identifies a minimum set of five "technically feasible" points at which incumbent LECs must provide interconnection: (1) the line side of a local switch (for example, at the main distribution frame); (2) the trunk side of a local switch; (3) the trunk interconnection points for a tandem switch; (4) central office cross-connect points; and (5) out-of-band signalling facilities, such as signalling transfer points, necessary to exchange traffic and access call-related databases. In addition, the points of access to unbundled elements (discussed below) are also technically feasible points of interconnection. The Commission finds that telecommunications carriers may request interconnection under section 251(c)(2) to provide telephone exchange or exchange access service, or both. If the request is for such purpose, the incumbent LEC must provide interconnection in accordance with section 251(c)(2) and the Commission's rules thereunder to any telecommunications carrier, including interexchange carriers and commercial mobile radio service (CMRS) providers.

4. Access to Unbundled Elements

27. Section 251(c)(3) requires incumbent LECs to provide requesting telecommunications carriers nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory. In the Report and Order, the Commission identifies a minimum set of network elements that incumbent LECs must provide under this section. States may require incumbent LECs to provide additional network elements on an unbundled basis. The minimum set of network elements the Commission identifies are: local loops, local and tandem switches (including all vertical switching features provided by such switches), interoffice transmission facilities, network interface devices, signalling and call-related database facilities, operations support systems functions, and operator and directory assistance facilities. The Commission concludes that incumbent LECs must provide nondiscriminatory access to operations support systems functions by January 1, 1997. The Commission concludes that access to such operations support systems is critical to affording new entrants a meaningful opportunity to compete with incumbent LECs. The Commission also concludes that incumbent LECs are required to provide access to network elements in a manner that allows requesting carriers to combine such elements as they choose, and that incumbent LECs

may not impose restrictions upon the uses to which requesting carriers put such network elements.

5. Methods of Obtaining Interconnection and Access to Unbundled Elements

28. Section 251(c)(6) requires incumbent LECs to provide physical collocation of equipment necessary for interconnection or access to unbundled network elements at the incumbent LEC's premises, except that the incumbent LEC may provide virtual collocation if it demonstrates to the state commission that physical collocation is not practical for technical reasons or because of space limitations. The Commission concludes that incumbent LECs are required to provide for any technically feasible method of interconnection or access requested by a telecommunications carrier, including physical collocation, virtual collocation, and interconnection at meet points. The Commission adopts, with certain modifications, some of the physical and virtual collocation requirements it adopted earlier in the *Expanded Interconnection* proceeding. The Commission also establishes rules interpreting the requirements of section 251(c)(6).

6. Pricing Methodologies

29. The 1996 Act requires the states to set prices for interconnection and unbundled elements that are cost-based, nondiscriminatory, and may include a reasonable profit. To help the states accomplish this, the Commission concludes that the state commissions should set arbitrated rates for interconnection and access to unbundled elements pursuant a forward-looking economic cost pricing methodology. The Commission concludes that the prices that new entrants pay for interconnection and unbundled elements should be based on the local telephone companies Total Service Long Run Incremental Cost of a particular network element, which the Commission calls "Total Element Long-Run Incremental Cost" (TELRIC), plus a reasonable share of forward-looking joint and common costs. States will determine, among other things, the appropriate risk-adjusted cost of capital and depreciation rates. For states that are unable to conduct a cost study and apply an economic costing methodology within the statutory time frame for arbitrating interconnection disputes, the Commission establishes default ceilings and ranges for the states to apply, on an interim basis, to interconnection arrangements. The Commission establishes a default range of 0.2-0.4 cents per minute for switching. For tandem switching, the Commission establishes a default ceiling of 0.15 cents per minute. The Order also establishes default ceilings for the other unbundled network elements.

7. Access Charges for Unbundled Switching

30. Nothing in this Report and Order alters the collection of access charges paid by an interexchange carrier under Part 69 of the Commission's rules, when the incumbent LEC provides exchange access service to an interexchange carrier, either directly or through service

resale. Because access charges are not included in the cost-based prices for unbundled network elements, and because certain portions of access charges currently support the provision of universal service, until the access charge reform and universal service proceedings have been completed, the Commission continues to provide for a certain portion of access charge recovery with respect to use of an incumbent LEC's unbundled switching element, for a defined period of time. This will minimize the possibility that the incumbent LEC will be able to "double recover," through access charges, the facility costs that new entrants have already paid to purchase unbundled elements, while preserving the status quo with respect to subsidy payments. Incumbent LECs will recover from interconnecting carriers the carrier common line charge and a charge equal to 75% of the transport interconnection charge for all interstate minutes traversing the incumbent LECs local switches for which the interconnecting carriers pay unbundled network element charges. This aspect of the Order expires at the earliest of: 1) June 30, 1997; 2) the effective date of final decisions by the Commission in the universal service and access reform proceedings; or 3) if the incumbent LEC is a Bell Operating Company (BOC), the date on which that BOC is authorized under section 271 of the Act to provide in-region interLATA service, for any given state.

31. For a similar limited period, incumbent LECs may charge the same portions of any intrastate access charges comparable to the carrier common line charge (CCLC) and the transport interconnection charge (TIC), as well as any existing explicit universal service support mechanisms based on intrastate access charges. During this period, incumbent LECs may continue to recover such revenues from purchasers of unbundled local switching elements that use those elements to originate or terminate intrastate toll calls for end user customers they win from incumbent LECs. These state mechanisms must end on the earlier of: (1) June 30, 1997; (2) the effective date of a state commission decision that an incumbent LEC may not assess such charges; and (3) if the incumbent LEC that receives the access charge revenues is a BOC, the date on which that BOC is authorized under section 271 of the 1996 Act to offer in-region interLATA service. The last end date will apply only to the recovery of charges in those states in which the BOC is authorized to offer interLATA service.

8. Resale

32. The 1996 Act requires all incumbent LECs to offer for resale any telecommunications service that the carrier provides at retail to subscribers who are not telecommunications carriers. Resale will be an important entry strategy both in the short term for many new entrants as they build out their own facilities and for small businesses that cannot afford to compete in the local exchange market by purchasing unbundled elements or by building their own networks. State commissions must identify marketing, billing, collection, and other costs that will be avoided or that are avoidable by incumbent LECs when they provide services wholesale, and calculate the portion of the retail rates for those services that is attributable to the avoided and avoidable costs. The Commission identifies certain avoided costs, and the application of this definition is left to the states. If a state elects not to

implement the methodology, it may elect, on an interim basis, a discount rate from within a default range of discount rates established by the Commission. The Commission establishes a default discount range of 17-25% off retail prices, leaving the states to set the specific rate within that range, in the exercise of their discretion.

9. Requesting Telecommunications Carriers

33. The Commission concludes that, to the extent that a carrier is engaged in providing for a fee local, interexchange, or international basic services directly to the public or to such classes of users as to be effectively available directly to the public, the carrier is a "telecommunications carrier," and is thus subject to the requirements of section 251(a) and the benefits of section 251(c). The Commission concludes that CMRS providers are telecommunications carriers, and that private mobile radio service (PMRS) providers generally are not telecommunications carriers, except to the extent that a PMRS provider uses excess capacity to provide local, interexchange, or international services for a fee directly to the public. The Commission also concludes that, if a company provides both telecommunications services and information services, it must be classified as a telecommunications carrier.

10. Commercial Mobile Radio Service

34. The Commission concludes that LECs are obligated, pursuant to section 251(b)(5) and the corresponding pricing standards of section 252(d)(2) to to enter into reciprocal compensation arrangements with CMRS providers, including paging providers, for the transport and termination of traffic on each other's networks. The Commission concludes that many CMRS providers (specifically cellular, broadband PCS and covered specialized mobile radio (SMR) providers) offer telephone exchange service and exchange access, and that incumbent LECs therefore must make interconnection available to these CMRS providers in conformity with sections 251(c) and 252. The Commission concludes that CMRS providers should not be classified as LECs at this time. The Commission also concludes that it may apply section 251 and 252 to LEC-CMRS interconnection. By opting to proceed under sections 251 and 252, the Commission is not finding that section 332 jurisdiction over interconnection has been repealed by implication, and the Commission acknowledges that section 332, in tandem with section 201, is a basis for jurisdiction over LEC-CMRS interconnection.

11. Transport and Termination

35. The 1996 Act requires that charges for transport and termination of traffic set based on "additional cost." The Commission concludes that state commissions, during arbitrations, should set symmetrical prices based on the local telephone company's forward-looking economic costs. The state commissions would use the TELRIC methodology when establishing rates for transport and termination. The Commission establishes a default range

of 0.2-0.4 cents per minute for end office termination for states which have not conducted a TELRIC cost study. The Commission finds significant evidence in the record in support of the lower end of the range. In addition, the Commission finds that additional reciprocal charges could apply to termination through a tandem switch. The default ceiling for tandem switching is 0.15 cents per minute, plus applicable charges for transport from the tandem switch to the end office. Each state opting for the default approach for a limited period of time, may select a rate within that range.

12. Access to Rights of Way

36. The Commission amends its rules to implement the pole attachment provisions of the 1996 Act. Specifically, the Commission establishes procedures for nondiscriminatory access by cable television systems and telecommunications carriers to poles, ducts, conduits, and rights-of-way owned by utilities or LECs. The Order includes several specific rules as well as a number of more general guidelines designed to facilitate the negotiation and mutual performance of fair, pro-competitive access agreements without the need for regulatory intervention. Additionally, an expedited dispute resolution is provided when good faith negotiations fail, as are requirements concerning modifications to poles, ducts, conduits, and rights-of-way and the allocation of the costs of such modifications.

13. Obligations Imposed on non-incumbent LECs

37. The Commission concludes that states generally may not impose on non-incumbent LECs the obligations set forth in section 251(c) entitled, "Additional Obligations on Incumbent Local Exchange Carriers." Section 251(h)(2) sets forth a process by which the Commission may decide to treat LECs as incumbent LECs, and state commissions or other interested parties may ask the Commission to issue a rule, in accordance with section 251(h)(2), providing for the treatment of a LEC as an incumbent LEC. In addition to this Report and Order, the Commission addresses in separate proceedings some of the obligations, such as dialing parity and number portability, that section 251(b) imposes on all LECs.

14. Exemptions, Suspensions, and Modifications of Section 251 Requirements

38. Section 251(f)(1) provides for exemption from the requirements in section 251(c) for rural telephone companies (as defined by the 1996 Act) under certain circumstances. Section 251(f)(2) permits LECs with fewer than 2 percent of the nation's subscriber lines to petition for suspension or modification of the requirements in sections 251(b) or (c). In the Report and Order, the Commission establishes a very limited set of rules interpreting the requirements of section 251(f). For example, the Commission finds that LECs bear the burden of proving to the state commission that a suspension or modification of the requirements of section 251(b) or (c) is justified. Rural LECs bear the burden of proving that continued exemption of the requirements of section 251(c) is justified, once a bona fide

request has been made by a carrier under section 251. The Commission also concludes that only LECs that, at the holding company level, have fewer than 2 percent of the nation's subscriber lines are entitled to petition for suspension or modification of requirements under section 251(f)(2). For the most part, however, the states will interpret the provisions of section 251(f) through rulemaking and adjudicative proceedings, and will be responsible for determining whether a LEC in a particular instance is entitled to exemption, suspension, or modification of section 251 requirements.

15. Commission Responsibilities Under Section 252

39. Section 252(e)(5) requires the Commission to assume the state's responsibilities under section 252 if the state "fails to act to carry out its responsibility" under that section. In the Report and Order, the Commission adopts a minimum set of rules that will provide notice of the standards and procedures that the Commission will use if it has to assume the responsibility of a state commission under section 252(e)(5). The Commission concludes that, if it arbitrates agreements, it will use a "final offer" arbitration method, under which each party to the arbitration proposes its best and final offer, and the arbitrator chooses among the proposals. The arbitrator could choose a proposal in its entirety, or could choose different parties' proposals on an issue-by-issue basis. In addition, the parties could continue to negotiate an agreement after they submit their proposals and before the arbitrator makes a decision.

40. Section 252(i) of the 1996 Act requires that incumbent LECs make available to any requesting telecommunications carrier any individual interconnection, service, or network element on the same terms and conditions as contained in any agreement approved under Section 252 to which they are a party. The Commission concludes that section 252(i) entitles all carriers with interconnection agreements to "most favored nation" status regardless of whether such a clause is in their agreement. Carriers may obtain any individual interconnection, service, or network element under the same terms and conditions as contained in any publicly filed interconnection agreement without having to agree to the entire agreement. Additionally, carriers seeking interconnection, network elements, or services pursuant to section 252(i) need not make such requests pursuant to the procedures for initial section 251 requests, but instead may obtain access to agreement provisions on an expedited basis.

II. SCOPE OF THE COMMISSION'S RULES

41. In implementing section 251, we conclude that some national rules are necessary to promote Congress's goals for a national policy framework and serve the public interest, and that states should have the major responsibility for prescribing the specific terms and conditions that will lead to competition in local exchange markets. Our approach in this Report and Order has been a pragmatic one, consistent with the Act, with respect to this allocation of responsibilities. We believe that the steps necessary to implement section 251 are not appropriately characterized as a choice between specific national rules on the one hand and substantial state discretion on the other. We adopt national rules where they facilitate administration of sections 251 and 252, expedite negotiations and arbitrations by narrowing the potential range of dispute where appropriate to do so, offer uniform interpretations of the law that might not otherwise emerge until after years of litigation, remedy significant imbalances in bargaining power, and establish the minimum requirements necessary to implement the nationwide competition that Congress sought to establish. This is consistent with our obligation to "complete all actions necessary to establish regulations to implement the requirements" of section 251.[15] Some of these rules will be relatively self-executing. In many instances, however, the rules we establish call on the states to exercise significant discretion and to make critical decisions through arbitrations and development of state-specific rules. Over time, we will continue to review the allocation of responsibilities, and we will reallocate them if it appears that we have inappropriately or inefficiently designated the decisionmaking roles.

42. The decisions in this Report and Order, and in this Section in particular, benefit from valuable insights provided by states based on their experiences in establishing rules and taking other actions intended to foster local competition. Through formal comments, *ex parte* meetings, and open forums,[16] state commissioners and their staffs provided extensive, detailed information to us regarding difficult or complex issues that they have encountered, and the various approaches they have adopted to address those issues. Information from the states highlighted both differences among communities within states, as well as similarities among states. Recent state rules and orders that take into account the local competition provisions of the 1996 Act have been particularly helpful to our deliberations about the types of national

[15] 47 U.S.C. § 251(d)(1).

[16] Public forum held on March 15, 1996, by FCC's Office of General Counsel to discuss interpretation of sections 251 and 252 of the Telecommunications Act of 1996; public forum held on July 9, 1996, by FCC's Common Carrier Bureau and Office of General Counsel to discuss implementation of section 271 of the Telecommunications Act of 1996.

rules that will best further the statute's goal of encouraging local telephone competition.[17] These state decisions also offered useful insights in determining the extent to which the Commission should set forth uniform national rules, and the extent to which we should ensure that states can impose varying requirements. Our contact with state commissioners and their staffs, as well as recent state actions, make clear that states and the FCC share a common commitment to creating opportunities for efficient new entry into the local telephone market. Our experience in working with state commissions since passage of the 1996 Act confirms that we will achieve that goal most effectively and quickly by working cooperatively with one another now and in the future as the country's emerging competition policy presents new difficulties and opportunities.

43. We also received helpful advice and assistance from other government agencies, including the National Telecommunications and Information Administration (NTIA), the Department of Justice, and the Department of Defense about how national rules could further the public interest. In addition, comments from industry members and consumer advocacy groups helped us understand better the varying and competing concerns of consumers and different representatives of the telecommunications industry. We benefitted as well by discovering that there are certain matters on which there is substantial agreement about the role the Commission should play in establishing and enforcing provisions of section 251.

A. Advantages and Disadvantages of National Rules

1. Background

44. Section 251(d)(1) instructs the Commission, within six months after the enactment of the 1996 Act (that is, by August 8, 1996), to "establish regulations to implement the requirements of [section 251]."[18] In addition, section 253 requires the Commission to preempt the enforcement of any state or local statute, regulation, or legal requirement that "prohibit[s]

[17] *See, e.g.*, Petition of AT&T for the Commission to Establish Resale Rules, Rates, Terms and Condition and the Initial Unbundling of Services, Docket No. 6352-U (Georgia Commission May 29, 1996); AT&T Communications of Illinois, Inc. *et al.*, Petition for a Total Local Exchange Wholesale Service Tariff from Illinois Bell Telephone Company, Nos. 95-0458 and 95-0531 (consol.) (Illinois Commission June 26, 1996); Hawaii Administrative Rules, Ch. 6-80, "Competition in Telecommunications Services," (Hawaii Commission May 17, 1996); Public Utilities Commission of Ohio Case No. 95-845-TP-COI (Local Competition) (Ohio Commission June 12, 1996) and Implementation of the Mediation and Arbitration Provisions of the Federal Telecommunications Act of 1996, Case No. 96-463-TP-UNC (Ohio Commission May 30, 1996); Proposed Rules regarding Implementation of §§ 40-15-101 *et seq.* Requirements relating to Interconnection and Unbundling, Docket No. 95R-556T (Colorado Commission April 25, 1996) (one of a series of Orders adopted by the Colorado Commission in response to the local competition provisions of the 1996 Act); Washington Utilities and Transportation Commission, Fifteenth Supplemental Order, Decision and Order Rejecting Tariff Revisions, Requiring Refiling, Docket No. UT-950200 (Washington Commission April 1996).

[18] 47 U.S.C. § 251(d)(1). The Commission's implementing rules should be designed "to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition." Joint Explanatory Statement at 1.

or [has] the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."[19]

45. In the NPRM, we stated our belief that we should implement Congress's goal of a pro-competitive, de-regulatory, national policy framework by adopting national rules that are designed to secure the full benefits of competition for consumers, with due regard to work already done by the states.[20] We sought comment on the extent to which we should adopt explicit national rules, and the extent to which permitting variations among states would further Congress's pro-competitive goals.[21] We anticipated that we would rely on actions some states have already taken to address interconnection and other issues related to opening local markets to competition. In the NPRM, we set forth some of the benefits that would likely result from implementing explicit national rules, and some of the benefits that would likely result from allowing variations among states.[22]

2. Comments

46. The parties recommend a broad spectrum of approaches with respect to the scope and detail of Commission regulations. The vast majority of potential local competitors, such as interexchange carriers (IXCs), competitive access providers (CAPs), and cable operators, assert that the Commission should adopt clear and explicit national standards that will serve as the backdrop for negotiations and will establish minimum requirements for arbitrated agreements.[23] Other parties, including federal agencies, consumer groups, and equipment manufacturers, also support explicit national rules.[24] These parties contend that explicit national standards are useful, or even critical, to achieving the pro-competitive goals enunciated by Congress.

[19] 47 U.S.C. § 253(a) and (d).

[20] NPRM at para. 26 (*citing* Joint Explanatory Statement at 1).

[21] NPRM at paras. 27, 35.

[22] NPRM at paras. 30-33.

[23] *See, e.g.*, AT&T comments at 3; MCI comments at 4-6; Sprint comments at 4-6; MFS comments at 5-6; Jones Intercable comments at 11, 13; Cable & Wireless comments at 6-7; LCI comments at 2, 13; TCC comments at 5-6; Hyperion comments at 6; Ad Hoc Telecommunications Users Committee comments at 3-10; LDDS reply at 4.

[24] *See, e.g.*, SBA comments at 4; Ohio Consumers' Counsel comments at 2-3; DoJ comments at 5-8; Lucent comments at 3; Frontier reply at 7; IDCMA reply at 2-9; NTIA reply at 3; National Association of the Deaf reply at 1-3; Texas Public Utility Counsel reply at 2.

47. Parties supporting explicit national rules assert that national standards will give incumbent LECs an incentive to negotiate if the national rules would subject the incumbents to less advantageous terms than they otherwise would be likely to negotiate.[25] Other advantages of national standards, according to these parties, include: reducing the likelihood of potentially inconsistent determinations by state commissions and courts,[26] and reducing burdens on new entrants that seek to provide service on a regional or national basis by limiting their need for separate network configurations and marketing strategies, and by increasing predictability.[27] As a result, they assert, new entrants would have greater access to capital necessary to develop competing services.[28] Parties state that collectively, these advantages demonstrate that national standards will foster competition more quickly than regulations developed on a state-by-state basis.[29] In addition, some parties contend that clear national standards also will assist both the states in arbitrating and reviewing agreements within the time frames set forth in section 252 and the FCC in arbitrating agreements under section 252(e)(5) where states have failed to act, and in reviewing BOC applications to enter

[25] *See, e.g.*, AT&T comments at 6-8 (noting that this is particularly true for non-BOC incumbent LECs, such as SNET and GTE, which already have interLATA authority and have no reason to comply with section 251); Cable & Wireless comments at 7-9; Hyperion comments at 7; MFS comments at 5-6; Teleport comments at 14-17 (vague standards will allow incumbents to adopt a "take it or leave it" approach); TCC comments at 5-7; Comcast reply at 5; CompTel reply at 7; LDDS reply at 3-4; NTIA reply at 3; PageNet reply at 4; *see also* Citizens Utilities comments at 5 (FCC should establish minimum standards sufficient to equalize bargaining power between incumbents and new entrants); Cox comments at 10; Excel comments at 2-3. *But see, e.g.*, Ameritech comments at 7-9 (incumbent LECs do not have vastly superior bargaining power, and cannot unilaterally impose terms upon other parties); PacTel comments at 6; USTA comments at 6 n.9 (the NPRM overstates the bargaining power of incumbent LECs; in particular, non-BOC LECs may have less bargaining power than IXCs, cable companies, or competitive access providers); USTA reply at 2-4; Bell Atlantic reply at 3.

[26] ALTS comments at 2-4; ACSI comments at 4; AT&T comments at 9-10; Cox comments at 22-23; DoJ comments at 12; Frontier comments at 6; GSA/DoD comments at 4-5; TIA comments at 5; MCI comments at 4-6 (differing rules will make it difficult to develop a rational national policy); TCC comments at 7-8, 13 (federal rules will eliminate the need for new entrants to expend resources fighting the same battle in 50 states); *accord* Cable & Wireless comments at 10 (even 50 excellent plans are not optimal if they are 50 different plans).

[27] AT&T comments at 9; Cable & Wireless comments at 6-9 (cost efficiencies of national networks are substantial); Excel comments at 2; Hyperion comments at 5; GST comments at 2; Jones Intercable comments at 11; Ohio Consumers' Counsel comments at 3; SBA comments at 4 (national rules will particularly help small competitors); Sprint comments at 3; TCC comments at 7-8; ACSI reply at 4; *see also* Intermedia comments at 3 (national uniform standards are necessary to resolve the many regulatory, technical and operational questions that accompany interconnection to incumbent LEC networks); Lucent comments at 3 (national standards will promote industry growth and assist telecommunications equipment vendors); SDN Users Association comments at 2; International Communications Ass'n comments at 3.

[28] ALTS comments at 2-4; GSA/DoD comments at 4-5; MCI comments at 4-6. *But see* GTE reply at 6 (uniform federal rules will not affect the ability of large, financially well-positioned entities like AT&T to obtain capital).

[29] *See, e.g.*, ALTS comments at 2-4; Competition Policy Institute comments at 10; DoJ comments at 13-15 (a single set of rules can be created faster than 50 different sets).

in-region interLATA markets pursuant to section 271.[30] Some parties that favor strong national rules caution against prematurely dismantling consumer protection rules and relying instead on competitive market conditions that do not yet exist.[31] Many commercial mobile radio service (CMRS) providers contend that national rules governing LEC-CMRS interconnection are necessary to foster development of a ubiquitous, nationwide network.[32]

48. Some state regulatory commissions advocate explicit national standards, at least in some areas. For example, the Massachusetts Commission states that the FCC can and should establish national rules in implementing section 251, except in the area of pricing.[33] The Kentucky Commission asserts that uniform national rules for market entry are necessary to ensure successful local competition, and that national pricing principles will aid states in setting rates during the arbitration process and in reviewing BOC statements of generally available terms.[34] The North Dakota Commission asserts that, while some states may not need federal support, specific standards would provide a necessary and significant benefit for North Dakota, in light of its limited resources to implement a pro-competitive regulatory regime.[35] The Illinois Commission states that minimum national rules are a major step toward competitive markets, but that states should be permitted to implement and enforce additional rules.[36]

[30] Ad Hoc Telecommunications Users Committee comments at 9-10; AT&T comments at 8-9, 11; Cable & Wireless comments at 7-9; CompTel comments at 22; Excel comments at 2.

[31] *See, e.g.*, Competition Policy Institute reply at 2, 11.

[32] *See, e.g.*, Vanguard comments in CC Docket No. 95-185 at 26; Centennial comments in CC Docket No. 95-185 at 31.

[33] Mass. Commission comments at 4-5. What, if any, rules the Commission should, as both a legal and policy matter, adopt with respect to pricing is addressed separately in *infra*, Section II.D.

[34] Kentucky Commission comments at 3-4. Section 252(f) permits a BOC to file for review by a state commission a statement of terms and conditions that the BOC offers to comply with the regulations of section 251 and the regulations thereunder. A BOC may be permitted to provide in-region interLATA service if, ten months after enactment of the 1996 Act, no carrier has requested access and interconnection (as described in section 271(c)(1)(A)) and the BOC has a statement of generally available terms and conditions that a state commission has approved or permitted to take effect. *See also* Kansas Commission comments at 4-5 (national interconnection standards to enable inter-company provisioning and national performance standards will facilitate negotiations and reduce the incumbent's negotiating advantage).

[35] North Dakota Commission comments at 1-2; *see also* Illinois Commission comments at 9-10 (minimum federal standards will give direction to states, will help create consistency among states, and will serve as a major step in the transition toward a competitive market, but states should be able to augment and build upon national standards).

[36] Illinois Commission comments at 9-10.

49. Some parties contend that national rules are particularly important for small competitors' entry into local markets.[37] Barriers to market entry, which cause delay, raise transactional costs, or otherwise impose economically inefficient constraints, are particularly threatening to small competitors, according to the Small Business Administration. Moreover, the Small Business Administration contends that the needs of small competitors deserve special consideration, because they are likely to fill niche market needs that larger competitors typically overlook.[38]

50. Other commenters oppose explicit national rules, or seek significant limits on the scope and detail of FCC requirements. The majority of state commissions and incumbent LECs advocate that the Commission establish general, broad regulations or guidelines, and leave substantial opportunity for the parties to negotiate specific terms,[39] with the states to establish specific requirements if the parties cannot reach agreement.[40] BellSouth urges the Commission merely to codify the language of the 1996 Act.[41]

51. Parties that oppose explicit national standards assert that they are contrary to the Act,[42] could impede the development of local competition,[43] and will undermine progressive

[37] *See, e.g.*, SBA comments at 3-4.

[38] *Id; accord, e.g.*, Richard N. Koch comments at 1-2; ATSI reply at 7-8. *Contra, e.g.*, Colorado Ind. Tel. Ass'n comments at 2-3; GVNW comments at 2; NARUC comments at 8; Joint Consumer Advocates reply at 5-6 (national standards will be particularly burdensome for small or rural LECs, and will make it difficult for "niche" providers to succeed); Rural Tel. Coalition comments at 4-8.

[39] Ameritech comments at 6; Bell Atlantic comments at 2-3; Georgia Commission comments at 3-5; Illinois Commission comments at 13; Lincoln Tel. comments at 3-4; Rural Tel. Coalition comments at 2; South Carolina Commission comments at 2-3; SBC comments at 4-5, 19-21; TDS comments at 3 (Congress evinced a preference for voluntarily negotiated agreements and the FCC should not try to alter the Act's mechanisms for transitioning to competition); USTA comments at 6; Ohio Consumers' Counsel reply at 3.

[40] *See, e.g.*, USTA comments at 6-8; Alabama Commission comments at 10; Ameritech comments at 4, 6; Bell Atlantic comments at 1-2; Iowa Commission comments at 2, 4; NARUC comments at 4, 22-24; Idaho Commission comments at 2-4; North Carolina Commission Staff comments at 10-11; Oklahoma Commission comments at 1-3; Puerto Rico Tel. comments at 3-4; *accord* Alliance for Public Technology comments at 8-10; CFA/CU comments at 4-5; Rural Tel. Coalition comments at 2, 6; TDS comments at 3; Texas Commission comments at 4-5.

[41] BellSouth comments at 3-5.

[42] Alaska Tel. Ass'n comments at 2; Ameritech comments at 9; Bell Atlantic comments at 2-3; GTE comments at 12-14; Puerto Rico Tel. comments at 2-3; Rural Tel. Coalition comments at 2, 6; SBC comments at 8-10, 18-19.

actions already taken by states.[44] They also assert that states should be given the opportunity to experiment with different approaches intended to promote local competition,[45] and that technical, economic, geographic, and demographic variations require tailored responses by state commissions.[46] For example, GTE states that, "[i]n reality, each local market is different -- some are flat, others are hilly or mountainous; some are densely populated, others are suburban or rural; some have state-of-the-art technology, others retain older facilities; some possess a temperate climate, others suffer harsh storms; some are wealthy, others are poor; some have a high proportion of business customers, others are predominantly residential."[47] Many parties counter that geographic differences do not merit state-specific rules instead of national rules.[48] They contend that the differences cited by GTE exist among different locales, but that many states include most of these variations within their borders.[49]

52. State commissions and incumbent LECs reject the suggestion that the FCC is required to impose nationally uniform requirements in order to achieve Congress's goals. For example, in support of its claim that Congress did not intend national uniformity, the New

[43] Ad Hoc Coalition of Corporate Telecommunications Managers comments at 2; BellSouth comments at 3-5; District of Columbia Commission comments at 11•12; Georgia Commission comments at 2; Maryland Commission comments at 2-3; Oregon Commission comments at 7, 25; PacTel comments at 1-3; California Commission reply at 8; *see also* Illinois Commission comments at 9-10 (overly extensive federal regulation could inhibit competition by restricting a state's ability to respond to technological and market developments and regional differences).

[44] Connecticut Commission comments at 8-9; GTE comments at 10; Maryland Commission comments at 5-6, 12; MECA comments at 11-12; Municipal Utilities comments at 6-8; North Carolina Commission Staff comments at 9-10; Oregon Commission comments at iv, 7; PacTel comments at 1-3; Washington Commission comments at 1-2.

[45] *See, e.g.*, Alliance for Public Technology comments at 8-10; Florida Commission comments at 2-3, 6; New York Commission comments at 18-19; Pennsylvania Commission comments at 17; TDS comments at 11.

[46] *See, e.g.*, District of Columbia Commission comments at 7; North Carolina Commission comments at 2-8; Wyoming Commission comments at 4-5 (Wyoming is rural and sparsely populated, and has among the highest costs in the country, but residents in both cities and rural areas require access to sophisticated services; it cannot "afford to be subjected needlessly to the problems which models designed to address other people's problems would cause").

[47] GTE comments at 7-8.

[48] ALTS comments at 4 (aside from universal service issues that are being addressed by a Joint Board in a separate proceeding, there are no unique policy concerns that states need to address or that would be endangered by national rules); Cable & Wireless comments at 9; DoJ comments at 13-15; GCI comments at 4; MCI comments at 4-6 (networks are not designed on a state-specific basis); Jones Intercable comments at 12; Cox reply at 4 n.8.

[49] *See, e.g.*, AT&T comments at 12.

York Commission cites the fact that agreements may be negotiated without reference to the Commission's regulations under section 251(b) and (c), and that under section 251(d)(3), states may impose rules consistent with the Act.[50]

3. Discussion

53. Comments and *ex parte* discussions with state commission representatives have convinced us that we share with states a common goal of promoting competition in local exchange markets. We conclude that states and the FCC can craft a working relationship that is built on mutual commitment to local service competition throughout the country, in which the FCC establishes uniform, national rules for some issues, the states and the FCC administer these rules, and the states adopt other critically important rules to promote competition. In implementing the national rules we adopt in this Report and Order, states will help to illuminate and develop innovative solutions regarding many complex issues for which we have not attempted to prescribe national rules at this time, and states will adopt specific rules that take into account local concerns. In this Report and Order, and in subsequent actions we intend to take, we have and will continue to seek guidance from various states that have taken the lead in establishing pro-competitive requirements.[51] Virtually every decision in this Report and Order borrows from decisions reached at the state level, and we expect this close association with and reliance on the states to continue in the future. We therefore encourage states to continue to pursue their own pro-competitive policies. Indeed, we hope and expect that this Report and Order will foster an interactive process by which a number of policies consistent with the 1996 Act are generated by states.

54. We find that certain national rules are consistent with the terms and the goals of the statute. Section 251 sets forth a number of rights with respect to interconnection, resale services, and unbundled network elements. We conclude that the Commission should define at least certain minimum obligations that section 251 requires, respectively, of all telecommunications carriers, LECs, or incumbent LECs. For example, as discussed in more detail below, we conclude that it is reasonable to identify a minimum number of network elements that incumbent LECs must unbundle and make available to requesting carriers pursuant to the standards set forth in sections 251(c) and (d), while also permitting states to go beyond that minimum list and impose additional requirements that are consistent with the 1996 Act and the FCC's implementing rules. We find no basis for permitting an incumbent LEC in some states not to make available these minimum technically feasible network elements that are provided by incumbent LECs in other states. We point out, however, that a

[50] New York Commission comments at 12-13; *see also* Maryland Commission comments at 9, 13, 20; Washington Commission comments at 7-8 (referencing section 252(e)(3)); Rural Tel. Coalition reply at 6.

[51] We also expect to rely heavily on state input and experience in other FCC proceedings, such as access reform and petitions concerning BOC entry into in-region interLATA markets.

uniform rule does not necessarily mean uniform results. For example, a national pricing methodology takes into account local factors and inputs, and thus may lead to different prices in different states, and different regions within states. In addition, parties that voluntarily negotiate agreements need not comply with the requirements we establish under sections 251(b) and (c), including any pricing rules we adopt.[52] We intend to review on an ongoing basis the rules we adopt herein in light of competitive developments, states' experiences, and technological changes.

55. We find that incumbent LECs have no economic incentive, independent of the incentives set forth in sections 271 and 274 of the 1996 Act, to provide potential competitors with opportunities to interconnect with and make use of the incumbent LEC's network and services. Negotiations between incumbent LECs and new entrants are not analogous to traditional commercial negotiations in which each party owns or controls something the other party desires. Under section 251, monopoly providers are required to make available their facilities and services to requesting carriers that intend to compete directly with the incumbent LEC for its customers and its control of the local market. Therefore, although the 1996 Act requires incumbent LECs, for example, to provide interconnection and access to unbundled elements on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, incumbent LECs have strong incentives to resist such obligations. The inequality of bargaining power between incumbents and new entrants militates in favor of rules that have the effect of equalizing bargaining power in part because many new entrants seek to enter national or regional markets. National (as opposed to state) rules more directly address these competitive circumstances.

56. We emphasize that, under the statute, parties may voluntarily negotiate agreements "without regard to" the rules that we establish under sections 251(b) and (c).[53] However, fair negotiations will be expedited by the promulgation of national rules. Similarly, state arbitration of interconnection agreements now and in the future will be expedited and simplified by a clear statement of terms that must be included in every arbitrated agreement, absent mutual consent to different terms. Such efficiency and predictability should facilitate entry decisions, and in turn enhance opportunities for local exchange competition. In addition, for new entrants seeking to provide service on a national or regional basis, minimum national requirements may reduce the need for designing costly multiple network configurations and marketing strategies, and allow more efficient competition. More efficient competition will, in turn, benefit consumers. Further, national rules will reduce the need for competitors to revisit the same issue in 51 different jurisdictions, thereby reducing administrative burdens and litigation for new entrants and incumbents.

[52] 47 U.S.C. § 252(a)(1).

[53] 47 U.S.C. § 252(a)(1).

57. We also believe that some explicit national standards will be helpful in enabling the Commission and the states to carry out other responsibilities under the 1996 Act. For example, national standards will enable the Commission to address issues swiftly if the Commission is obligated to assume section 252 responsibilities because a state commission has failed to act.[54] In addition, BOCs that seek to offer long distance service in their service areas must satisfy, *inter alia*, a "competitive checklist" set forth in section 271(c)(2)(B). Many of the competitive checklist provisions require compliance with specific provisions of section 251. For example, the checklist requires BOCs to provide "nondiscriminatory access to network elements in accordance with the requirements of sections 251(c)(3) and 252(d)(1)."[55] Some national rules also will help the states, the DOJ, and the FCC carry out their responsibilities under section 271, and assist BOCs in determining what steps must be taken to meet the requirements of section 271(c)(2)(B), the competitive checklist. In addition, national rules that establish the minimum requirements of section 251 will provide states with a consistent standard against which to conduct the fact-intensive process of verifying checklist compliance, the DOJ will have standards against which to evaluate the applications, and we will have standards to apply in adjudicating section 271 petitions in an extremely compressed time frame. Moreover, we believe that establishing minimum requirements that arbitrated agreements must satisfy will assist states in arbitrating and reviewing agreements under section 252, particularly in light of the relatively short time frames for such state action. While some states reject the idea that national rules will help the state commissions to satisfy their obligations under section 252 to mediate, arbitrate, and review agreements, other states have welcomed national rules, at least with respect to certain matters.[56]

58. A broad range of parties urge the Commission to adopt minimum requirements that would permit states to impose additional, pro-competitive requirements that are consistent with the 1996 Act to address local or state-specific circumstances. We agree generally that many of the rules we adopt should establish non-exhaustive requirements, and that states may impose additional pro-competitive requirements that are consistent with the purposes and

[54] *See* 47 U.S.C. § 252(e)(5).

[55] 47 U.S.C. § 271(c)(2)(B)(ii).

[56] For example, the Georgia and Colorado Commissions support national technical standards for interconnection and collocation, although they generally disfavor detailed standards. Georgia Commission comments at 2; Colorado Commission comments at 2-4. The Illinois Commission, which has aggressively sought to open opportunities for local telephone competition, asserts that minimum national rules are important in developing competitive local telephone service, although it urges the Commission to permit states to implement and enforce additional rules that are consistent with the national rules. Illinois Commission comments at 9-10. The North Dakota Commission has expressed a need for specific national guidance to enable the commission to carry out its obligations under the Act. North Dakota Commission comments at 1-2.

terms of the 1996 Act, including our regulations established pursuant to section 251.[57] We also anticipate that the rules we adopt regarding interconnection, services, and access to unbundled elements will evolve to accommodate developments in technology and competitive circumstances, and that we will continue to draw on state experience in applying our rules and in addressing new or additional issues. We recognize that it is vital that we reexamine our rules over time in order to reflect developments in the dynamic telecommunications industry. We cannot anticipate all of the changes that will occur as a result of technological advancements, competitive developments, and practical experience, particularly at the state level. Therefore, ongoing review of our rules is inevitable. Moreover, we conclude that arbitrated agreements must permit parties to incorporate changes to our national rules, or to applicable state rules as such changes may be effective, without abrogating the entire contract. This will ensure that parties, regardless of when they enter into arbitrated agreements, will be able to take advantage of all applicable Commission and state rules as they evolve.

59. Some parties contend that even minimum requirements may impede the ability of state commissions to take varying approaches to address particular circumstances or conditions. We agree with the contention that, although there are different market conditions from one area to another, such distinct areas do not necessarily replicate state boundaries.[58] For example, virtually all states include both more densely-populated areas and sparsely populated rural areas, and all include both business and residential areas. Although each state is unique in many respects, demographic and other differences among states do not suggest that national rules are inappropriate. Moreover, even though it may not be appropriate to impose identical requirements on carriers with different network technologies, our rules are intended to accommodate such differences.[59] Some parties have argued that explicit national standards will delay the emergence of local telephone competition, but none has offered persuasive evidence to substantiate that claim, and new entrants overwhelmingly favor strong national rules. We conclude, for the reasons set forth above, that some national rules will enhance opportunities for local competition, and we have chosen to adopt national rules where necessary to establish the minimum requirements for a nationwide pro-competitive policy framework.

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[57] In contrast, we conclude that the 1996 Act limits the obligations states may impose on non-incumbent carriers. *See infra*, Section XI.C.

[58] AT&T comments at 12.

[59] *See infra*, Section IV.E. (concluding that successful interconnection or access to an unbundled element at a particular point in the network creates a rebuttable presumption that such interconnection or access is technically feasible at networks that employ *substantially similar facilities*). We agree with parties, such as the Ohio Consumers' Counsel, that physical networks are not designed on a state-by-state basis. Ohio Consumers' Counsel comments at 4.

60. We disagree with those parties that claim we are trying to impose a uniformity that Congress did not intend. Variations among interconnection agreements will exist, because parties may negotiate their own terms, states may impose additional requirements that differ from state to state, and some terms are beyond the scope of this Report and Order. We conclude, however, that establishing certain rights that are available, through arbitration, to all requesting carriers, will help advise parties of their minimum rights and obligations, and will help speed the negotiation process. In effect, the Commission's rules will provide a national baseline for terms and conditions for all arbitrated agreements. Our rules also may tend to serve as a useful guide for negotiations by setting forth minimum requirements that will apply to parties if they are unable to reach agreement. This is consistent with the broad delegation of authority that Congress gave the Commission to implement the requirements set forth in section 251.

61. We also believe that national rules will assist smaller carriers that seek to provide competitive local service. As noted above, national rules will greatly reduce the need for small carriers to expend their limited resources securing their right to interconnection, services, and network elements to which they are entitled under the 1996 Act. This is particularly true with respect to discrete geographic markets that include areas in more than one state.[60] We agree with the Small Business Administration that national rules will reduce delay and lower transaction costs, which impose particular hardships for small entities that are likely to have less of a financial cushion than larger entities.[61] In addition, even a small provider may wish to enter more than one market, and national rules will create economies of scale for entry into multiple markets. We reject the position advocated by some parties that we should not adopt national rules because such rules will be particularly burdensome for small or rural incumbent LECs.[62] We note, however, that section 251(f) provides relief from some of our rules.

62. We recognize the concern of many state commissions that the Commission not undermine or reverse existing state efforts to foster local competition. We believe that Congress did not intend for us needlessly to disrupt the pro-competitive actions some states already have taken that are both consistent with the 1996 Act and our rules implementing section 251.[63] We believe our rules will in many cases be consistent with pro-competitive

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[60] Approximately 17 Personal Communications Service (PCS) providers have Basic Service Areas/Metropolitan Statistical Areas, for example, that cross state lines.

[61] SBA comments at 3-4.

[62] *See, e.g.*, Joint Consumer Advocates reply at 5-6.

[63] 47 U.S.C. § 251(d)(3).

actions already taken by states, and in fact, many of the rules we adopt are based directly on existing state commission actions. We also intend to continue to reflect states' experiences as we revise our rules. We also recognize, however, that in at least some instances existing state requirements will not be consistent with the statute and our implementing rules.[64] It will be necessary in those instances for the subject states to amend their rules and alter their decisions to conform to our rules. In our judgment, national rules are highly desirable to achieve Congress's goal of a pro-competitive national policy framework for the telecommunications industry.

B. Suggested Approaches for FCC Rules

1. Comments

63. Parties propose a variety of approaches that the Commission could take in establishing rules for interconnection, network unbundling, and other issues addressed in section 251.[65] Many parties suggest that the Commission can, and should, establish regulations within six months of the date of enactment of the 1996 Act, and continue on an ongoing basis to revise and amend rules regarding interconnection, service, and access to unbundled network elements.[66] Parties have differing views about why Congress imposed relatively short time frames for action by states and the FCC.[67] Some parties suggest that the Commission take a largely "hands off" approach initially, but that it set more specific rules if and when such rules are needed.[68] IXCs, state commissions, incumbent LECs and others

[64] *See infra*, Section II.C.

[65] *See, e.g.*, Cox comments at 22-23; Illinois Commission comments at 9-10; MCI comments at 12; MFS comments at 5-6; SBA comments at 5; Attorneys General reply at 3; California Commission reply at 10-11; Minnesota Ind. Coalition reply at 3-4; National Association of the Deaf reply at 1-3.

[66] MCI reply at 5; Sprint reply at 11.

[67] *See, e.g.*, DoJ comments at 13-15 (the short time frame in which to establish rules evidences Congress's desire to bring about change quickly, which could only occur through a single set of rules, rather than through many iterations); *contra, e.g.*, SBC comments at 10 (the short time frames for seeking arbitration and for state commission review of agreements reflect Congress's desire to bring about change more quickly than the pace that the regulatory process historically has achieved).

[68] Alliance for Public Technology comments at 8-10; U S West comments at 3-4, Illinois Commission comments at 9-10.

agree that, in setting national rules, the Commission should learn from and build upon the experiences of the states.[69]

64. Some state commissions and incumbent LECs recommend that the FCC establish general, broad principles rather than detailed requirements.[70] Several parties favor a "preferred outcomes" approach similar to the one adopted in California.[71] Under that approach, the FCC would establish acceptable or "preferred" outcomes, but parties would have the opportunity to justify deviation from those outcomes.[72] The California Commission argues that we should establish a range of guidelines that are detailed enough to be easy to implement by states that have not yet developed rules for competition, but flexible enough to allow states to continue their pro-competitive efforts without disruption.[73] At least one party, however, asserts that a "preferred outcomes" approach is not sufficient to provide incumbent LECs with an incentive to bargain in good faith.[74]

65. Some state commissions recommend that, if the FCC does establish explicit requirements, states should be allowed to impose different requirements. For example, the Illinois Commission urges the FCC to adopt a process by which states may seek a waiver from the national regulations, upon a showing of need.[75] The Ohio and Florida Commissions recommend that the FCC adopt explicit requirements that states could choose to adopt, but that states would have the option of developing their own requirements.[76] Under the proposal recommended by the Ohio Commission, existing state regulations that are consistent with the

[69] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 11-13; MCI comments at 12; Sprint comments at 6-7.

[70] Citizens Utilities comments at 3; Guam Telephone Authority comments at 5; Lincoln Tel. comments at 1, 3; District of Columbia Commission comments at 11-12.

[71] *See, e.g.*, GTE comments at 12-14; PacTel comments at 1-3; Washington Commission comments at 1-2; ALTS comments at 2-4; Teleport comments at 14-17; Texas Public Utility Counsel reply at 2; Minnesota Ind. Coalition reply at 8.

[72] ALTS comments at 2-4.

[73] California Commission reply at 4-7.

[74] Comcast reply at 5.

[75] Illinois Commission comments at 13; *accord* AT&T comments at 11; ACTA comments at 2-4.

[76] Florida Commission comments at 2-3; Ohio Commission comments at 4-5; *accord* NYNEX reply at 4.

1996 Act would be "grandfathered."[77] In addition, if a state failed to adopt any rules regarding competitive entry into local markets within a specified time, the FCC rules would be binding.[78]

2. Discussion

66. We intend to adopt minimum requirements in this proceeding; states may impose additional pro-competitive requirements that are consistent with the Act and our rules. We decline to adopt a "preferred outcomes" approach, because such an approach would fail to establish explicit national standards for arbitration, and would fail to provide sufficient guidance to the parties' options in negotiations. To the extent that parties advocate "preferred outcomes" from which the parties could deviate in arbitrated agreements, we reject such a proposal, because we conclude that it would not provide the benefits conferred by establishing "default" requirements. To the extent that commenters advocate a regulatory approach that would require parties to justify a negotiated result different from the preferred outcomes, we believe that such an approach would impose greater constraints on voluntarily negotiated agreements than the 1996 Act permits. Under the 1996 Act, parties may freely negotiate any terms without justifing deviation from "preferred outcomes."[79] The only restriction on such negotiated agreements is that they must be deemed by the state commission to be nondiscriminatory and consistent with the public interest, under the standards set forth in section 252(e)(2)(A). In response to the Illinois Commission's suggestion that we adopt a process by which states may seek waivers of our rules, we note that Commission rules already provide for waiver of our rules under certain circumstances.[80] We decline to adopt a special waiver process in this proceeding.

67. We intend our rules to give guidance to the parties regarding their rights and obligations under section 251. The specificity of our rules varies with respect to different issues; in some cases, we identify broad principles and leave to the states the determination of what specific requirements are necessary to satisfy those principles. In other cases, we find that local telephone competition will be better served by establishing specific requirements. In each of the sections below, we discuss the basis for adopting particular national principles or rules.

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[77] Ohio Commission comments at 4-5; *accord* NARUC comments at 6-7.

[78] Ohio Commission comments at 4-5.

[79] 47 U.S.C. § 252(a) (parties may negotiate and enter into a binding agreement without regard to standards set forth in sections 251(b) and (c)).

[80] 47 C.F.R. § 1.3.

68. We also believe that we should periodically review and amend our rules to take into account experiences of carriers and states, technological changes, and market developments. The actions we take here are fully responsive to Congress's mandate that we complete all actions necessary to establish regulations to implement the requirements of section 251 by August 8, 1996.[81] We nevertheless retain authority to refine or augment our rules, or to follow a different course, after developing some practical experience with the rules adopted herein. It is beyond doubt that the Commission has ongoing rulemaking authority. For example, section 4(i) provides that the Commission "may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with the Act, as may be necessary in the execution of its functions."[82] Section 4(j) provides that the Commission "may conduct its proceedings in such manner as will best conduce to the proper dispatch and to the ends of justice."[83] We agree with Sprint, the Illinois Commission, and other parties that we should address in this rulemaking the most important issues, and continue to refine our rules on an ongoing basis to address additional or unanticipated issues, and especially to learn from the decisions and experiences of the states.[84] We also reject the argument of Margaretville Telephone Company that the 1996 Act constitutes an unconstitutional taking because it seeks to deprive incumbent LECs of their "reasonable, investment-backed expectation to hold competitive advantages over new market entrants."[85]

C. Legal Authority of the Commission to Establish Rules Applicable to Intrastate Aspects of Interconnection, Services, and Unbundled Network Elements

1. Background

69. In the NPRM, we tentatively concluded that Congress intended sections 251 and 252 to apply, and that our rules should apply, to both interstate and intrastate aspects of

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[81] 47 U.S.C. § 251(d)(1).

[82] 47 U.S.C. § 154(i).

[83] 47 U.S.C. § 154(j). Section 11 of the 1996 Act also directs the Commission to review and modify its rules on an ongoing basis. 47 U.S.C. § 161.

[84] Sprint comments at vi, 6-7; Illinois Commission comments at 9-10. Although various parties have encouraged us to address issues that are beyond those identified in the NPRM, we will address only those topics identified in the NPRM, or that are a clear and logical outgrowth from issues specifically identified in the NPRM. *See, e.g.*, Unicom comments at 1-2 (urging the Commission to extend to IXCs the rules it adopts for LECs regarding collocation, interconnection, and unbundling); TCI comments at 15-17 (asking Commission to clarify the extent to which municipalities have control over rights-of-way under section 253).

[85] Margaretville Tel. comments at 1-4.

interconnection, services, and access to network elements.[86] We stated in the NPRM that it would seem to make little sense, in terms of economics or technology, to distinguish between interstate and intrastate components for purposes of sections 251 and 252.[87] We also believed that such a distinction would appear to be inconsistent with Congress's desire to establish a national policy framework for interconnection and other issues critical to achieving local competition. We sought comment on these tentative conclusions.

70. We further tentatively concluded in the NPRM that section 2(b) of the 1934 Act does not require a contrary conclusion.[88] Section 2(b) states that, except as provided in certain enumerated sections not including sections 251 and 252, "nothing in [the 1934] Act shall be construed to apply or to give to the Commission jurisdiction with respect to . . . charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service by wire or radio of any carrier . . . ."[89] We noted in the NPRM that sections 251 and 252 do not alter the jurisdictional division of authority with respect to matters falling outside the scope of these provisions.[90] For example, rates charged to end users for local exchange service have traditionally been subject to state authority, and will continue to be.

2. Comments

71. The parties disagree about the extent to which the FCC has authority to establish regulations pursuant to sections 251 and 252. A majority of commenters that address the issue contend that sections 251 and 252 apply to both interstate and intrastate aspects of interconnection, services, and access to unbundled network elements.[91] Other commenters contend, however, that sections 251 and 252 apply only to intrastate aspects of

[86] NPRM at para. 37.

[87] NPRM at para. 37.

[88] NPRM at para. 39.

[89] 47 U.S.C. § 152(b).

[90] NPRM at para. 40.

[91] *See, e.g.*, ACTA comments at 4; ALTS comments at 6; ACSI comments at 5; Arch comments at 5; Bell Atlantic comments at 7-8 (section 251 addresses matters of a "predominantly intrastate nature"); BellSouth comments at 8; Cable & Wireless comments at 11; CompTel comments at 15; Florida Commission comments at 7; GCI comments at 4; GSA/DoD comments at 6; GTE comments at 3; Jones Intercable comments at 10; MCI comments at 7-8; Sprint comments at 7; TCI comments at 12; Texas Commission comments at 5; NTIA reply at 6 n.15; NCTA reply at 2-7.

interconnection, services, and access to unbundled network elements.[92] None of the commenters appears to claim that section 251 addresses exclusively interstate matters. As discussed below, many parties, including BOCs and state commissions, contend that the FCC's role under sections 251 and 252 is quite limited.[93]

72. The IXCs and other potential competitors in local exchange markets generally assert that the 1996 Act expressly authorizes, and even obligates, the Commission to establish regulations regarding interstate and intrastate aspects of interconnection, service, and access to unbundled network elements. For example, MCI contends that, "[b]ecause the technical feasibility and cost of providing a particular arrangement do not depend on whether the requesting carrier uses that arrangement to provide interstate or intrastate services," it would make no sense to interpret section 251 to include a jurisdictional distinction between interstate and intrastate aspects of interconnection that does not appear on the face of that provision.[94] Several parties assert that sections 251 and 252 alter traditional jurisdictional boundaries by giving states some authority over interstate matters that they previously did not have, and by giving the FCC some new authority over intrastate matters.[95] Other parties assert that section 251 clearly applies to intrastate aspects of interconnection, services, and access to unbundled elements, and that, as a basic principle of administrative law, to the extent that section 251 addresses intrastate matters, the FCC has authority to adopt implementing regulations.[96]

73. Parties point to other provisions in the 1996 Act to show that the traditional jurisdictional division of authority between states and the FCC does not apply with respect to sections 251 and 252. MCI contends that section 253, by addressing federal preemption of both interstate and intrastate barriers to competition, makes it clear that the jurisdictional division of responsibility is inapplicable.[97] Parties also point to the fact that the Commission must in some circumstances assume the state commission's responsibilities as evidence of a

[92] NARUC comments at 9-10; New York Commission comments at 10-11; U S West comments at 10-11.

[93] Bell Atlantic comments at 7-8; GTE comments at 3; PacTel comments at 11.

[94] MCI comments at 7, 8 (it is highly unlikely that interconnection arrangements will be used exclusively for jurisdictional-specific traffic).

[95] Illinois Commission comments at 3-5, 15; Sprint comments at 5; CompTel reply at 5; Rural Tel. Coalition reply at 3.

[96] MCI reply at 36-37; Vanguard reply at 4 (*citing Time Warner v. FCC*, 56 F.3d 151, 174-76 (D.C. Cir. 1995) for the proposition that agencies are empowered to interpret their organic statutes, through rules and other mechanisms, to govern the behavior of parties regulated under those statutes).

[97] MCI comments at 7-8; *accord* Sprint comments at 4; CompTel comments at 15; TCI reply at 6.

shift in jurisdictional authority.[98] Jones Intercable asserts that sections 251 and 252 of the 1996 Act make distinctions among classes of entities (telecommunications carriers, LECs, and incumbent LECs), rather than between interstate and intrastate service.[99]

74. AT&T contends that, by requiring the Commission to "complete all actions necessary to establish regulations to implement the requirements of this Section," section 251(d)(1) requires the Commission to establish minimum national standards for interconnection, unbundling, pricing, resale, and related requirements.[100] AT&T states that the 1996 Act was created pursuant to the settled rule that federal agency regulations preempt any inconsistent state policies unless the underlying federal statute otherwise provides.[101] It interprets section 251(d)(3) to mean that any Commission regulation that reasonably implements section 251 bars state enforcement of any inconsistent state regulations, without regard to whether the preemptive provisions of section 253 would also apply. According to AT&T, the only limitation on the Commission's preemptive powers is that it may not preclude the enforcement of state access and interconnection requirements that are consistent with the 1996 Act and the FCC's implementing regulations.[102] AT&T maintains that this interpretation is consistent with the fact that section 252(c)(1) requires state commissions to ensure that nonvoluntary agreements are consistent with the Commission's regulations under section 251(d).[103]

75. AT&T further contends that section 2(b) of the Act does not limit the Commission's authority to promulgate rules under section 251, because section 251 "gives the FCC explicit authority to prescribe and enforce preemptive rules that are necessary to achieve

[98] *See, e.g.*, ACTA comments at 4; New Jersey Cable Ass'n, *et al.* reply at 18-19; TCI reply at 6.

[99] Jones Intercable comments at 10; *see also* Time Warner comments at 7; Cable & Wireless comments at 11-12 (sections 251 and 252 apply to *all* telecommunications services, and the definitions of "telecommunications," "telecommunications service," and "telecommunications carrier" are defined without reference to jurisdictional boundaries); New Jersey Cable Ass'n, *et al.* reply at 18-19; GSA/DoD reply at 7 (Congress did not intend to expand traditional interstate and intrastate jurisdictional distinctions); Competitive Policy Institute reply at 10.

[100] AT&T comments at 4 (*quoting* § 251(d)(1) of the Act).

[101] AT&T comments at 4-5 (*citing Fidelity Federal Savings and Loan Assoc. v. de la Cuesta*, 458 U.S. 141, 152-154 (1982); *City of New York v. FCC*, 467 U.S. 57, 64 (1988); *Oklahoma Natural Gas v. FERC*, 28 F.3d 1281, 1283 (D.C. Cir. 1994)).

[102] AT&T comments at 5 and nn.3-4; *accord* Cable & Wireless comments at 11 (in section 253, Congress made clear that the Commission has authority to preempt any state requirement that creates a barrier to either interstate or intrastate services, or that is inconsistent with the 1996 Act); MCI comments at 7-8; Sprint comments at 4.

[103] AT&T comments at 5-6.

the Act's purpose of developing local services competition."[104] Sprint, Comcast, and other parties assert that Congress intended section 251 to give the Commission authority over both interstate and intrastate aspects of interconnection, notwithstanding the fact that it left section 2(b) unamended.[105] For example, Comcast contends that section 253(a) authorizes the Commission to preempt any state or local requirement that prohibits or has the effect of prohibiting any interstate or intrastate telecommunications service.[106] In view of the explicit grants of authority in sections 251 and 253, Comcast asserts that it was unnecessary to amend section 2(b). Cable & Wireless contends that the fact that section 251(d)(1) provides that the FCC "shall" in some cases preempt state regulations is evidence that Congress did not believe it was required to amend section 2(b) before delegating intrastate authority to the FCC.[107] AT&T asserts that the fact that prior versions of the legislation amended section 2(b) to except Part II of Title II of the Act is not dispositive; when the language was taken out, it was not listed as a substantive change, but treated as a "minor drafting" or "clerical" change.[108] AT&T asserts that this was an appropriate characterization, because section 2(b) would not have had any effect in any event.

76. Several parties contend that the Act makes clear that states are required to apply FCC rules established under section 251. For example, sections 252(c)(1) and (f)(2) explicitly require the states to apply the FCC's regulations.[109] In addition, section 261(c) provides that state requirements must be "not inconsistent" with Part II of Title II, including the Commission's regulations thereunder.[110] Thus, the parties contend that these provisions constitute express federal preemption, and that section 601(c), which provides that any

[104] AT&T comments at 6 (section 2(b) cannot be read to nullify section 2(a) and sections 201 to 205) (*citing California v. FCC*, 39 F.3d 919, 931-33 (9th Cir. 1994); *PUC of Texas v. FCC*, 886 F.2d 1325 (D.C. Cir. 1990); *NARUC v. FCC*, 746 F.2d 1492 (D.C. Cir. 1984); *Louisiana PSC v. FCC*, 476 U.S. 355, 375-76 n.4 (1986)).

[105] Sprint comments at 7; Comcast reply at 2-3; NCTA reply at 5-6.

[106] Comcast reply at 2-3.

[107] Cable & Wireless reply at 9-10.

[108] AT&T reply at 4 n.5 (citing Joint Explanatory Statement at 113).

[109] AT&T reply at 2.

[110] Jones Intercable comments at 11-12; MCI reply at 7; MFS reply at 7; New Jersey Cable Ass'n, *et al.* reply at 23.

preemptive effect of the new law must be express, does not establish limits to the FCC's authority to establish regulations under section 251.[111]

77. Sprint states that other provisions of the 1996 Act:

> subordinate state actions and policies with respect to intrastate service to those of the Commission, *e.g.*, sections 253 (entry barriers), 254(f) (universal service), 258 (PIC change procedures), and 276 (payphone services). If Congress had intended the jurisdictional split in section 2(b) to remain unaffected by the 1996 Act, all of these very specific subordinations of state policy to federal policy would be nullities, and much of the 1996 Act would make no sense at all.[112]

Sprint contends that the only way to give meaning to both section 2(b) and the above-referenced provisions is to conclude that the section 2(b) distinctions remain in effect for "retail" services offered to end users, but that the detailed scheme for intercarrier relationships set forth in Part II of Title II supersedes section 2(b).[113] MCI concurs, and adds that this interpretation is consistent with settled principles of statutory construction that the specific prevails over the general, and the later-enacted provision prevails over the earlier-enacted provision.[114]

78. Some state commissions and some other commenters assert that section 251, as well as other provisions of the 1996 Act, support the interpretation that Congress intended states to have a primary role in setting requirements for intrastate interconnection. For example, these parties assert that section 251(d)(3) is evidence that Congress intended to permit states to implement their own access and interconnection regulations, and that this statutory language requires the FCC to fashion its regulations to avoid precluding state interconnection policy or rules.[115] They note that section 251(d)(3) requires consistency with

[111] New Jersey Cable Ass'n, *et al.* reply at 23; Jones Intercable reply at 15.

[112] Sprint comments at 7.

[113] Sprint comments at 7-8.

[114] MCI comments at 8 (*citing Stendor Enterprises Ltd. v. Armtex, Inc.*, 947 F.2d 727,732 (4th Cir. 1991); *Redhouse v. C.I.R.*, 728 F.2d 1249, 1253 (9th Cir. 1984); *Mesa Petroleum Co. v. FERC*, 688 F.2d 1014, 1016 (5th Cir. 1982)).

[115] Maryland Commission comments at 22; Ohio Commission comments at 16-17 (*citing* Joint Explanatory Statement at 1, 119); *accord, e.g.*, Bogue, Kansas comments at 4; Connecticut Commission comments at 7; NARUC comments at 14; PacTel comments at 14; Pennsylvania Commission comments at 7-9.

the Act, but does not mandate consistency with the FCC's regulations.[116] SNET asserts that, if Congress intended to preclude state discretion to interpret section 251 requirements, it would have preempted all state policies addressing those requirements, rather than just policies that substantially prevent implementation of the statute.[117] Some parties also point out that section 251(d)(3) is entitled "Preservation of state access regulations," and argue that the stated purpose of that provision is to preserve or "grandfather" most, if not all, state access and interconnection regulations.[118] They also allege that section 601(c) of the 1996 Act demonstrates that Congress intended to preserve states' authority over intrastate matters, and that any preemption finding would have to be based on an express provision.[119] Bogue, Kansas states that section 256(c) also makes clear that nothing in that section expands or limits the Commission's authority prior to the enactment of the 1996 Act.[120] The Oregon Commission argues that section 261 also permits states to impose requirements, as long as those requirements are not inconsistent with the 1996 Act.[121]

79. Some state commissions and incumbent LECs contend that the Commission's authority to establish regulations that may preempt state requirements is limited to those instances where section 251 expressly provides for Commission action.[122] Some parties also contend that, because section 252(e)(5) specifically requires the FCC to assume the responsibilities of the state commission if the state commission fails to act under section 252, the FCC's role under section 252 is limited to that specific delegation of authority.[123]

[116] Maryland Commission comments at 22; Washington Commission comments at 6-7.

[117] SNET reply at 1-2; *accord* Colorado Commission comments at 5-9.

[118] Ohio Commission reply at 3; BellSouth reply at 5.

[119] *See, e.g.*, District of Columbia Commission comments at 6; Maryland Commission comments at 21; NARUC comments at 13; Ohio Commission comments at 15-16; Wyoming Commission comments at 10; BellSouth reply at 5-6.

[120] Bogue, Kansas comments at 5.

[121] Oregon Commission comments at 13-14; *accord* Washington Commission comments at 9; Rural Tel. Coalition reply at 4.

[122] Rural Tel. Coalition comments at 5 ("Commission authority should be limited to establishing number portability requirements, regulations for limitations on resale, minimum unbundling requirements, rules for administering the North American Numbering Plan, enforcing existing access and interconnection requirements, and determining whether to treat additional carriers as incumbent LECs); *see also* District of Columbia Commission comments at 8-10; NARUC comments at 14-15; New York Commission comments at 2-3, 8.

[123] *See, e.g.*, NARUC comments at 15; New York Commission comments at 9; PacTel comments at 13.

80. These parties also reject the claim that section 251 takes precedence over section 2(b).[124] They note that section 2(b) was not amended by the 1996 Act, although prior version of the bills would have done so.[125] Moreover, parties claim that, in other instances, Congress did specifically amend section 2(b) to give the Commission authority over intrastate aspects of specified matters.[126] Bell Atlantic asserts that the failure to amend section 2(b) is "fatal to the notice's proposed federalization of intrastate interconnection and other intrastate matters."[127] The Ohio Commission expressly rejects the suggestion in the NPRM that there was no need to amend section 2(b) because sections 251 and 252 do not affect end user rates.[128]

81. Some parties further contend that preemption must be express, not implied, and that no such express statement was made in section 251.[129] Parties also assert that, by comparison, the Act is "quite clear in preempting states where it intended to do so."[130] For example, the New York Commission asserts that, in certain circumstances, section 254(f) expressly directs states to act in a manner that is "not inconsistent" with FCC rules.[131] NARUC asserts that there is a "well established presumption against finding preemption of State law in areas traditionally regulated by the States" that weighs against an interpretation

[124] *See, e.g.*, Bell Atlantic comments at 4; Connecticut Commission comments at 5; Oregon Commission comments at 12; Indiana Commission Staff comments at 4-5; Iowa Commission comments at 6.

[125] *See, e.g.*, Maryland Commission comments at 16 (*citing* Conf. Rep. No. 104-230 at 78 and H.R. 1555 Rep. No. 104-204 at 53); *accord* NARUC comments at 10 (*citing Russello v. U.S.*, 464 U.S. 16 (1989)); Oregon Commission comments at 15.

[126] California Commission comments at 11; Connecticut Commission comments at 7 (*citing* the Omnibus Budget Reconciliation Act of 1993 as an example of congressional intent to alter jurisdictional authority); Maryland Commission comments at 20; Ohio Commission comments at 14-15; BellSouth reply at 4.

[127] Bell Atlantic comments at 7.

[128] Ohio Commission comments at 15 (the 1993 amendments to section 2(b) expressly reserved to states responsibility for wholesale rates in general).

[129] *See, e.g.*, NARUC comments at 12 (*citing Hillsborough County v. Automated Medical Laboratories*, 471 U.S. 707, 175 (1985)); Arizona Commission comments at 16; Bogue, Kansas comments at 3 (*citing Gregory v. Ashcroft*, 501 U.S. 452, 460 (1991)); New York Commission comments at 6 (*citing Washington Market v. Hoffman*, 101 U.S. 112 (1879)); Municipal Utilities reply at 5 (FCC may not preempt state regulations that are consistent with the Act).

[130] Bogue, Kansas comments at 4 n.3 (section 251(e) gives FCC "exclusive jurisdiction" over some aspects of Number Administration); Maryland Commission comments at 15; Ohio Commission comments at 12, 16.

[131] New York Commission comments at 8; *see also* NARUC comments at 12 (contrasting section 276, which explicitly provides that Commission regulations shall preempt inconsistent state requirements).

that the FCC has broad regulatory authority to establish rules governing local exchange markets.[132]

82. To support their claim that, in 1934, Congress established a dual regulatory system, and that the FCC's jurisdiction is limited to interstate issues, except where otherwise expressly provided, these parties cite to the Supreme Court's decision in *Louisiana Public Service Comm'n v. FCC*.[133] The Maryland Commission contends that *Louisiana PSC* is controlling here, because: (1) the dual regulatory system was not eliminated by the 1996 Act; (2) the FCC may not rely upon the broad congressional intent to promote competition as a delegation of authority over intrastate issues; and (3) the 1996 Act does not embody a federal regulatory scheme that is so pervasive as to infer that Congress left no room for states to supplement it.[134] PacTel claims that, because section 251 was created after the decision in *Louisiana PSC*, Congress was aware that, if it wanted section 251 to override section 2(b), it would have to do so in an unambiguous manner. Consequentially, because Congress did not amend section 2(b) or otherwise expressly limit its effect, section 2(b) takes precedence over section 251 to the extent the provisions conflict.[135] Several parties offer additional bases for finding that the *Louisiana PSC* decision controls the scope of the Commission's authority under section 251.[136]

3. Discussion

[132] NARUC comments at 12 (*quoting California v. ARC America Corp.*, 490 U.S. 91, 101 (1989)).

[133] 476 U.S. 335 (1986) (*Louisiana PSC*). In that case, the Supreme Court held that section 220 of the 1934 Act, which directs the FCC to set depreciation regulations, did not give the FCC authority to preempt inconsistent state depreciation regulations for intrastate ratemaking purposes.

[134] Maryland Commission comments at 17-18 (*citing Fidelity Savings and Loan Assn v. de la Cuesta*, 458 U.S. 141, 153 (1982)); *accord* Ohio Commission comments at 11; Oregon Commission comments at 13; Washington Commission comments at 9-10.

[135] PacTel comments at 14-15.

[136] The Maryland Commission further asserts that compliance with both federal and state regulation as envisioned by the 1996 Act is not a physical impossibility that would support a claim of implied preemption. Maryland Commission comments at 18 (*citing Florida Lime & Avocado Growers Inc. v. Paul*, 373 U.S. 132, 142-43 (1963)); *accord* Washington Commission comments at 10. The Ohio Commission avers that it is possible for the FCC to promulgate rules that apply to interstate services only. Ohio Commission comments at 13. Several states also reject the idea that section 251 squarely addresses, and therefore controls, the jurisdictional issue, because there is "no mention of intrastate services or preemption of states' authority over such matters in Section 251." Ohio Commission comments at 12; Maryland Commission comments at 23; *accord* Bell Atlantic comments at 6. Pacific Telesis asserts that sections 251 and 2(b) may be read as internally consistent, and that, under rules of statutory construction, they must be so interpreted. PacTel comments at 12-13 (*citing Washington Market Co v. Hoffman*, 101 U.S. 112 (1879)). Bell Atlantic states that the Supreme Court held in *Louisiana PSC* that the rule of statutory construction that the specific takes precedence over the general does not apply where two provisions "address 'different subject[s]' and therefore 'are not general or specific with respect to each other.'" Bell Atlantic comments at 6 (*quoting Louisiana PSC*, 476 U.S. at 376 n.5); GTE reply at 5.

83. We conclude that, in enacting sections 251, 252, and 253, Congress created a regulatory system that differs significantly from the dual regulatory system it established in the 1934 Act.[137] That Act generally gave jurisdiction over interstate matters to the FCC and over intrastate matters to the states. The 1996 Act alters this framework, and expands the applicability of both national rules to historically intrastate issues, and state rules to historically interstate issues.[138] Indeed, many provisions of the 1996 Act are designed to open telecommunications markets to all potential service providers, without distinction between interstate and intrastate services.

84. For the reasons set forth below, we hold that section 251 authorizes the FCC to establish regulations regarding both interstate and intrastate aspects of interconnection, services, and access to unbundled elements. We also hold that the regulations the Commission establishes pursuant to section 251 are binding upon states and carriers and section 2(b) does not limit the Commission's authority to establish regulations governing intrastate matters pursuant to section 251. Similarly, we find that the states' authority pursuant to section 252 also extends to both interstate and intrastate matters. Although we recognize that these sections do not contain an explicit grant of intrastate authority to the Commission or of interstate authority to the states, we nonetheless find that this interpretation is the only reasonable way to reconcile the various provisions of sections 251 and 252, and the statute as a whole. As we indicated in the NPRM, it would make little sense in terms of economics or technology to distinguish between interstate and intrastate components for purposes of sections 251 and 252.[139]

85. We view sections 251 and 252 as creating parallel jurisdiction for the FCC and the states. These sections require the FCC to establish implementing rules to govern interconnection, resale of services, access to unbundled network elements, and other matters, and direct the states to follow the Act and those rules in arbitrating and approving arbitrated agreements under sections 251 and 252. Among other things, the fact that the Commission is

[137] According to Senator Pressler, "Progress is being stymied by a morass of regulatory barriers which balkanize the telecommunications industry into protective enclaves. We need to design a *national policy framework* -- a new regulatory paradigm for telecommunications -- which accommodates and accelerates technological change and innovation." 141 Cong. Rec. S7881-2, S7886 (June 7, 1995) (emphasis added). According to Representative Fields, "[Congress] is decompartmentalizing segments of the telecommunications industry, opening the floodgates of competition through deregulation, and most importantly, giving consumers choice . . .", 142 Cong. Rec. H1149 (Feb. 1, 1996).

[138] For example, section 253(a) suggests that states may establish regulations regarding interstate as well as intrastate matters.

[139] We believe that this interpretation is the most reasonable one in light of our expectation that marketing and product offerings by telecommunications carriers will diminish or eliminate the significance of interstate-intrastate distinctions.

required to assume the state commission's responsibilities if the state commission fails to carry out its section 252 responsibilities[140] gives rise to the inevitable inference that both the states and the FCC are to address the same matters through their parallel jurisdiction over both interstate and intrastate matters under sections 251 and 252.

86. The only other possible interpretations would be that: (1) sections 251 and 252 address only interstate aspects of interconnection, services, and access to unbundled elements; (2) the provisions address only the intrastate aspects of those issues; or (3) the FCC's role is to establish rules for interstate aspects, and the states' role is to arbitrate and approve agreements on intrastate aspects. As explained below, none of these interpretations withstands examination. Accordingly, we conclude that sections 251 and 252 address both interstate and intrastate aspects of interconnection services and access to unbundled elements.

87. Some parties have argued that our authority under section 251 is limited by section 2(b). Ordinarily, in light of section 2(b), we would interpret a provision of the Communications Act as addressing only the interstate jurisdiction unless the provision (as well as section 2(b) itself) provided otherwise. That interpretation is contradicted in this case, however, by strong evidence in the statute that the local competition provisions of the 1996 Act are directed to both intrastate and interstate matters. For example, section 251(c)(2), the interconnection requirement, requires LECs to provide interconnection "for the transmission and routing of *telephone exchange service* and exchange access."[141] Because telephone exchange service is a local, intrastate service, section 251(c)(2) plainly addresses intrastate service, but it also addresses interstate exchange access. In addition, we note that in section 253," the statute explicitly authorizes the Commission to preempt intrastate and interstate barriers to entry.[142]

88. More generally, if these sections are read to address only interstate services, the grant of substantial responsibilities to the states under section 252 is incongruous. A statute designed to develop a *national* policy framework to promote local competition cannot reasonably be read to reduce significantly the FCC's traditional jurisdiction over interstate matters by delegating enforcement responsibilities to the states, unless Congress intended also

[140] *See* 47 U.S.C. § 252(e)(5).

[141] 47 U.S.C. § 251(c)(2).

[142] 47 U.S.C. § 253(a).

to implement its national policies by enhancing our authority to encompass rulemaking authority over intrastate interconnection matters.[143]

89. Some parties argue that section 251 addresses solely intrastate matters. We do not find this argument persuasive.[144] Under this narrow view, section 251(c)(6) requiring incumbent LECs to offer physical collocation would apply only to equipment used for intrastate services, while new entrants would be limited to the use of virtual collocation for equipment used in the provision of interstate services, pursuant to the decision in *Bell Atlantic*.[145] Such an interpretation would force new entrants to use different methods of collocation based on the jurisdictional nature of the traffic involved, and would thereby greatly increase new entrants' costs. Moreover, such an interpretation would fail to give effect to Congress's intent in enacting section 251(c)(6) to reverse the result reached in *Bell Atlantic*.[146]

90. Another factor that makes clear that sections 251 and 252 did not address exclusively intrastate matters is the provision in section 251(g), "Continued Enforcement of Exchange Access and Interconnection Requirements." That section provides that BOCs must follow the Commission's "equal access and nondiscriminatory interconnection restrictions (including receipt of compensation)" until they are explicitly superseded by Commission regulations after the date of enactment of the 1996 Act. This provision refers to existing Commission rules governing interstate matters, and therefore it contradicts the argument that section 251 addresses intrastate matters exclusively.

91. Nor does the savings clause of section 251(i) require us to conclude that sections 251 and 252 address only intrastate issues. Section 251(i) provides that "[n]othing in this section shall be construed to limit or otherwise affect the Commission's authority under section 201." This subsection merely affirms that the Commission's preexisting authority

[143] The legislative history is replete with statements indicating that Congress meant to address intrastate local exchange competition. For instance, Senator Lott stated that "[i]n addressing *local and long distance issues*, creating an open access and sound interconnection policy was the key objective . . ." 141 Cong. Rec. S7906 (June 7, 1995) (emphasis added). Representative Markey noted that "we take down the barriers of *local and long distance* and cable company, satellite, computer software entry into any business they want to get in." 142 Cong. Rec. H1151 (Feb. 1, 1996) (emphasis added).

[144] *See, e.g.*, New York Commission comments at 5-8.

[145] *Bell Atlantic Telephone Companies v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994) (*Bell Atlantic*) (holding that the Commission did not have authority to require physical collocation for the provision of interstate services).

[146] The language in the House bill which closely matches the language that appears in section 251(c)(6), noted that a provision requiring physical collocation was necessary "because a recent court decision indicates that the Commission lacks authority under the Communications Act to order physical collocation." H.R. Rep. No. 204, pt. I, 104th Cong., 1st Sess., at 73 (1995).

under section 201 continues to apply for purely interstate activities. It does not act as a limitation on the agency's authority under section 251.

92. As to the third possible interpretation, the FCC's role is to establish rules for only the interstate aspects of interconnection, and the states' role is to arbitrate and approve only the intrastate aspects of interconnection agreements. No commenters support this position, and we find that it would be inconsistent with the 1996 Act to read into sections 251 and 252 such a distinction. The statute explicitly contemplates that the states are to comply with the Commission's rules, and the Commission is required to assume the state commission's responsibilities if the state commission fails to act to carry out its section 252 responsibilities.[147] Thus, we believe the only logical conclusion is that the Commission and the states have parallel jurisdiction. We conclude, therefore, that these sections can only logically be read to address both interstate and intrastate aspects of interconnection, services, and access to unbundled network elements, and thus to grant the Commission authority to establish regulations under 251, binding on both carriers and states, for both interstate and intrastate aspects.

93. Section 2(b) of the Act does not require a different conclusion. Section 2(b) provides that, except as provided in certain enumerated sections not including sections 251 and 252, "nothing in [the 1934] Act shall be construed to apply or to give to the Commission jurisdiction with respect to . . . charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service by wire or radio of any carrier . . .".[148] As stated above, however, we have found that sections 251 and 252 do apply to "charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service."[149] In enacting sections 251 and 252 after section 2(b), and squarely addressing therein the issue of interstate and intrastate jurisdiction, we find that Congress intended for sections 251 and 252 to take precedence over any contrary implications based on section 2(b).[150] We note also, that in enacting the 1996 Act, there are other instances where Congress indisputably gave the Commission intrastate jurisdiction without amending section 2(b). For instance, section 251(e)(1) provides that "[t]he Commission shall

[147] 47 U.S.C. § 252(e)(5).

[148] 47 U.S.C. § 152(b).

[149] 47 U.S.C. § 152(b).

[150] *See, e.g., Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 384 (1992) ("it as a commonplace of statutory construction that the specific governs the general"); *see also* 2 J. Sutherland, Statutory Construction § 22.34 (6th ed.) (where amended and original sections of a statute cannot be harmonized, the new provisions should prevail as the latest declaration of legislative will); *American Airlines, Inc. v. Remis Industries, Inc.*, 494 F.2d 196, 200 (2nd Cir. 1974).

have exclusive jurisdiction over those portions of the North American Numbering Plan that pertain to the United States."[151] Section 253 directs the FCC to preempt state regulations that prohibit the ability to provide intrastate services. Section 276(b) directs the Commission to "establish a per call compensation plan to ensure that payphone service providers are fairly compensated for each and every completed intrastate and interstate call."[152] Section 276(d) provides that "[t]o the extent that any State requirements are inconsistent with the Commission's regulations, the Commission's regulations on such matters shall preempt such State requirements."[153] None of these provisions is specifically excepted from section 2(b), yet *all* of them explicitly give the FCC jurisdiction over intrastate matters. Thus, we believe that the lack of an explicit exception in section 2(b) should not be read to require an interpretation that the Commission's jurisdiction under sections 251 and 252 is limited to interstate services. A contrary holding would nullify several explicit grants of authority to the FCC, noted above, and would render parts of the statute meaningless.[154]

94. Some parties find significance in the fact that earlier drafts of the legislation would have amended section 2(b) to make an exception for Part II of Title II, including section 251, but the enacted version did not include that exception. These parties argue that this change in drafting demonstrates an intention by Congress that the limitations of section 2(b) remain fully in force with regard to sections 251 and 252. We find this argument unpersuasive.

95. Parties that attach significance to the omission of the proposed amendment of section 2(b) rely on a rule of statutory construction providing that, when a provision in a prior draft is altered in the final legislation, Congress intended a change from the prior version. This rule of statutory construction has been rejected, however, when changes from one draft to another are not explained.[155] In this instance, the only statement from Congress regarding the meaning of the omission of the section 2(b) amendment appears in the Joint Explanatory Statement of the Conference Report. According to the Joint Explanatory Statement, all differences between the Senate Bill, the House Amendment, and the substitute reached in conference are noted therein "except for clerical corrections, conforming changes made

[151] 47 U.S.C. § 251 (e)(1).

[152] 47 U.S.C. § 276(b).

[153] 47 U.S.C. § 276(d).

[154] *See* Sprint comments at 7.

[155] *Mead Corp v. Tilley*, 490 U.S. 714, 723 (1989); *Rastelli v. Warden*, 782 F.2d 17, 23 (2d Cir. 1986); *Drummond Coal v. Watt*, 735 F.2d 469, 474 (11th Cir. 1984).

necessary by agreements reached by the conferees, and minor drafting and clerical changes."[156] Because the Joint Explanatory Statement did not address the removal of the section 2(b) amendment from the final bill, the logical inference is that Congress regarded the change as an inconsequential modification rather than a significant alteration. Moreover, it seems implausible that, by selecting the final version, Congress intended a radical alteration of the Commission's authority under section 251, given the total lack of legislative history to that effect. We conclude that elimination of the proposed amendment of section 2(b) was a nonsubstantive change because, as AT&T contends, such amendment was unnecessary in light of the grants of authority under sections 251 and 252, and would have had no practical effect.[157]

96. Some parties have argued that, to the extent that sections 251 and 252 address intrastate matters, the Commission's rulemaking authority under those sections is limited to those instances where Commission action regarding intrastate matters is specifically mandated, such as number administration. We disagree. There is no language limiting the Commission's authority to establish rules under section 251. To the contrary, section 251(d)(1) affirmatively requires Commission rules, stating that "the Commission *shall* complete *all* actions necessary to implement the requirements of *this section*."[158] Pursuant to sections 4(i), 201(b), and 303(r) of the Act, the Commission generally has rulemaking authority to implement all provisions of the Communications Act. Courts have held that the Commission, pursuant to its general rulemaking authority, has "expansive" rather than limited powers.[159] Further, where Congress has expressly delegated to the Commission rulemaking responsibility with respect to a particular matter, such delegation constitutes "something more than the normal grant of authority permitting an agency to make ordinary rules and regulations . . . ."[160] Indeed, to read these provisions otherwise would negate the requirement that states ensure that arbitrated agreements are consistent with the Commission's rules. Thus, the explicit rulemaking requirements pointed out by some of the parties is best read as giving the Commission more jurisdiction than usual, not less. We believe that the delegation of authority set forth in section 251(d)(1) is "expansive" and not limited. We therefore reject

[156] Joint Explanatory Statement at 113.

[157] AT&T reply at 4 n.5.

[158] 47 U.S.C. § 251(d)(1) (emphasis added).

[159] *National Broadcasting Co. v. United States*, 319 U.S. 190, 219 (1943); *see also Federal Communications Commission v. National Citizens Committee for Broadcasting*, 436 U.S. 775, 793 (1978).

[160] *Fulani v. FCC*, 49 F.3d 904, 909 (2d Cir. 1995) (cite omitted); *see also Kay v. FCC*, 443 F.2d 638, 640 (D.C.Cir. 1970).

assertions that the Commission has authority to establish regulations regarding intrastate matters only with respect to certain provisions of section 251, such as number administration.

97. Moreover, the Court in *Louisiana PSC* does not suggest a different result. The reasoning in *Louisiana PSC* applies to the dual regulatory system of the 1934 Act. As set forth above, however, in sections 251-253, Congress amended the dual regulatory system that the Court addressed in *Louisiana PSC*. As a result, preemption in this case is governed by the usual rule, also recognized in *Louisiana PSC*, that an agency, acting within the scope of its delegated authority, may preempt inconsistent state regulation.[161] As discussed above, Congress here has expressed an intent that our rules apply to intrastate interconnection, services, and access to network elements. Therefore, *Louisiana PSC* does not foreclose our adoption of regulations under section 251 to govern intrastate matters.

98. Parties have raised other arguments suggesting that the Commission lacks authority over intrastate matters. We are not persuaded by the argument that sections 256(c) and 261, as well as section 601(c) of the 1996 Act, evince an intent by Congress to preserve states' exclusive authority over intrastate matters. In fact, section 261 supports the finding that the Commission may establish regulations regarding intrastate aspects of interconnection, services and access to unbundled elements that the states may not supersede. Section 261(b) *generally* permits states to enforce regulations prescribed prior to the date of enactment of the 1996 Act, and to prescribe regulations after such date, if such regulations are not inconsistent with the provisions of Part II of Title II.[162] Section 261(c) *specifically* provides that nothing in Part II of Title II "precludes a State from imposing requirements on a telecommunications carrier for intrastate services that are necessary to further competition in the provision of telephone exchange service or exchange access, as long as the State's requirements are not inconsistent with this part *or the Commission's regulations to implement this part.*"[163] We conclude that state access and interconnection obligations referenced in section 251(d)(3) fall within the scope of section 261(c). Section 261(c), as the more specific provision, controls over section 261(b) for matters that fall within its scope.[164] We note, too, that section 261(c) encompasses all state requirements. It is not limited to requirements that were prescribed prior to the enactment of the 1996 Act. By providing that state requirements for *intrastate* services must be consistent with the Commission's regulations, section 261(c) buttresses our

[161] *Louisiana PSC*, 476 U.S. at 368.

[162] 47 U.S.C. § 261(b).

[163] 47 U.S.C. § 261(c) (emphasis added).

[164] *Morton v. Mancari*, 417 U.S. 535, 550-51 (1974).

conclusion that the Commission may establish regulations regarding intrastate aspects of interconnection, services, and access to unbundled elements.

99. Section 601 of the 1996 Act and section 256 also are consistent with our conclusion. Section 601(c) of the 1996 Act provides that the Act and its amendments "shall not be construed to modify, impair, or supersede Federal, State, or local law unless expressly so provided in such Act or amendments."[165] We conclude that section 251(d)(1), which requires the Commission to "establish regulations to implement the requirements of this section,"[166] and section 261(c), were expressly intended to modify federal and state law and jurisdictional authority.

100. Section 256, entitled "Coordination for Interconnectivity," has no direct bearing on the issue of the Commission's authority under section 251, because it provides only that "[n]othing *in this section* shall be construed as expanding or limiting any authority that the Commission may have under law in effect before the date of enactment of the Telecommunications Act of 1996."[167] That provision is relevant, however, as a contrast to section 251, which does not contain a similar statement that the scope of the Commission's authority is unchanged by section 251.[168]

101. We further conclude that the Commission's regulations under section 251 are binding on the states, even with respect to intrastate issues. Section 252 provides that the agreements state commissions arbitrate must comply with the Commission's regulations established pursuant to section 251. In addition, section 253 requires the Commission to preempt state or local regulations or requirements that "prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."[169] As discussed above, section 261(c) provides further support for the conclusion that states are bound by the regulations the Commission establishes under section 251.

102. We disagree with claims that section 251(d)(3) "grandfathers" existing state regulations that are consistent with the 1996 Act, and that such state regulations need not

[165] Telecommunications Act of 1996, § 601(c)(1).

[166] 47 U.S.C. § 251(d)(1).

[167] 47 U.S.C. § 256(c) (emphasis added).

[168] *Russello v. United States*, 464 U.S. 16, 23 (1983); *Cramer v. Internal Revenue Service*, 64 F.3d 1406, 1412 (9th Cir. 1995) (where Congress includes a provision in one section of statute but omits it in another section of the same Act, it should not be implied where it is excluded).

[169] 47 U.S.C. § 253(a).

comply with the Commission's implementing regulations. Section 251(d)(3) only specifies that the Commission may not preclude enforcement of state access and interconnection requirements that are consistent with section 251, and that do not substantially prevent implementation of the requirements of section 251 or the purposes of Part II of Title II. In this Report and Order, we set forth only such rules that we believe are necessary to implement fully section 251 and the purposes of Part II of Title II. Thus, state regulations that are inconsistent with our rules may "substantially prevent implementation of the requirements of this section and the purposes of [Part II of Title II]."[170]

103. We are not persuaded by arguments that, because other provisions of the 1996 Act specifically require states to comply with the Commission's regulations, the absence of such requirement in section 251(d)(3) indicates that Congress did not intend such compliance. Section 251(d)(3) permits states to prescribe and to enforce access and interconnection requirements only to the extent that such requirements "are consistent with the requirements" of section 251[171] and do not "substantially prevent implementation" of the requirements of section 251 and the purposes of Part II of Title II.[172] The Commission is required to establish regulations to "implement the requirements of the section."[173] Therefore, in order to be consistent with the requirements of section 251 and not "substantially prevent" implementation of section 251 or Part II of Title II, state requirements must be consistent with the FCC's implementing regulations.[174]

D. Commission's Legal Authority and the Adoption of National Pricing Rules

1. Background

104. In the NPRM, we sought comment on our tentative conclusion that sections 251(c)(2), (c)(3), and (c)(6) establish the Commission's legal authority under section 251(d) to adopt pricing rules to ensure that the rates, terms, and conditions for interconnection, access to

[170] 47 U.S.C. § 251(d)(3)(C).

[171] 47 U.S.C. § 251(d)(3)(B).

[172] 47 U.S.C. § 251(d)(3)(C).

[173] 47 U.S.C. § 251(d)(1).

[174] We recognize that, in some instances, whether particular state requirements are consistent with the Commission's rules may need to be considered on a case-by-case basis.

unbundled network elements, and collocation are just, reasonable, and nondiscriminatory.[175] We also sought comment on our tentative conclusion that sections 251(b)(5) and 251(c)(4) establish our authority to define "wholesale rates" for purposes of resale, and "reciprocal compensation arrangements" for purposes of transport and termination of telecommunications services.[176] In addition, we asked parties to comment on our tentative conclusion that the Commission's statutory duty to implement the pricing requirements of section 251, as elaborated in section 252, requires that we establish pricing rules interpreting and further explaining the provisions of section 252(d). The states would then apply these rules in establishing rates pursuant to arbitrations and in reviewing BOC statements of generally available terms and conditions.[177]

105. We further sought comment on our tentative conclusion that national pricing rules would likely reduce or eliminate inconsistent state regulatory requirements, increase the predictability of rates, and facilitate negotiation, arbitration, and review of agreements between incumbent LECs and competitive providers.[178] We also sought comment on the potential consequences of the Commission not establishing specific pricing rules.[179]

2. Comments

106. *Legal Authority.* The Department of Justice, GSA/DoD, many potential new entrants, and a few state commissions maintain that the Act gives the Commission a critical role in establishing national pricing rules to ensure that the rates for interconnection, access to unbundled network elements, and collocation are just, reasonable, and nondiscriminatory.[180] They contend that section 251(d)(1) specifically directs the Commission, without limitation, to

[175] NPRM at para. 117.

[176] *Id.* at 118.

[177] *Id.* at para. 118.

[178] *Id.* at para. 119.

[179] *Id.*

[180] *See, e.g.*, DoJ comments at 24-25; GSA/DoD comments at 8, reply at 6; Teleport comments at 44; ALTS comments at 33; GST comments at 25-26; Hyperion comments at 19; ACSI comments at 53, reply at 18-19; MFS comments at 49; MCI comments at 59; Sprint comments at 42; Cox comments at 22; TCI comments at 6; Time Warner comments at 45; WinStar comments at 28, reply at 6-7; Comcast reply at 12; AT&T reply at 5; Kentucky Commission comments at 3; Wyoming Commission comments at 27; *see also* NCTA comments at 8-9; Texas Public Utility Counsel comments at 15; Jones Intercable comments at 10-12, reply at 10-13 (arguing that the Commission should adopt national binding pricing rules); New Jersey Cable Ass'n, *et al.* reply at 6-9, 11 (arguing that the pricing rules adopted by the Commission should be binding); Vanguard reply at 4-5.

develop pricing rules governing transport and termination, interconnection, the provisioning of unbundled network elements, and resale.[181] These parties maintain that nothing in sections 251 and 252 expressly precludes the Commission from establishing pricing rules for the states to apply.[182] Therefore, they argue that the broad grant of authority under section 251(d)(1) includes authority to establish pricing rules.[183]

107. On the other hand, most state commissions, BOCs, and incumbent LEC trade associations contend that nothing in the 1996 Act specifically authorizes the Commission to adopt pricing rules.[184] A group of state commissions and NARUC contend that the Commission's authority to implement the requirements of section 251 is limited to the express activities assigned to the Commission in that section, such as prescribing regulations for resale and numbering portability, determining unbundled network elements, and establishing a North American Numbering Plan Administrator (NANPA) and a cost recovery mechanism for the administrators' operations.[185] The New York Commission contends that the 1996 Act is unambiguous in reserving intrastate pricing to the states under section 252(d), and that any Commission regulations would apply only to states that do not act to open local markets to competition and to those provisions in section 251 that require specific Commission rules.[186] The Ohio Commission asserts that section 251(d)(3) explicitly provides that the Commission

[181] DoJ comments at 24-25; Sprint comments at 42; Teleport comments at 44; GST comments at 25-26.

[182] *Id*; *see also* Citizens Utilities comments at 15-16.

[183] DoJ comments at 24-25; Sprint comments at 42; Teleport comments at 44; GST comments at 25-26.

[184] *See, e.g.*, Wisconsin Commission comments at 4; Ohio Commission comments at 36-39; Florida Commission comments at 24-25; Colorado Commission comments at 10; Pennsylvania Commission comments at 10-11, 26-27; Washington Commission comments at 23; Maryland Commission comments at 11; South Carolina Commission comments at 2; Minnesota Commission reply at 2-3; Nebraska Rural Development Commission comments at 1; Virginia Commission Staff comments at 2-3; Mass. Commission comments at 4; Idaho Commission comments at 10; New York Commission comments at 10, 23, reply at 4-5; Georgia Commission comments at 2-3, 7; Arizona Commission comments at 18; District of Columbia Commission comments at 24-28 (stating that the Commission has authority to adopt non-binding guidelines that would be helpful to states); Missouri Commission comments at 7-8; Texas Commission comments at 21; Alabama Commission comments at 6, 9, 22; Maine Commission, *et al.* comments at 2-4; Illinois Commission comments at 8, 41; Indiana Commission comments at 4-5; New Hampshire Commission, *et al.* reply at 3; NARUC comments at 16-20, reply at 3-5; PacTel comments at 13, 63; SBC comments at 51-53, 70-71; BellSouth comments at 48-49, reply at 31-32; Rural Tel. Coalition comments at 24; USTA comments at 4-5; GTE comments at 59, reply at 3-5; SNET comments at 28; TDS comments at 17 n.14.

[185] NARUC comments at 14-15; Maine Commission, *et al.* comments at 2-4; *see also* GTE comments at 6-7.

[186] New York Commission comments at 2-3; *see also* Pennsylvania Commission comments at 10-11, 26-27; Virginia Commission Staff comments at 3.

shall not preclude states from enforcing or implementing the requirements of section 251, as long as the state's policy is consistent with section 251.[187]

108. The Illinois Commission states that section 252(d) governs pricing standards for interconnection and network element charges, transport and termination of traffic, and wholesale services.[188] It argues that each provision expressly establishes standards under which state commissions are to determine prices, without reference to any Commission rulemaking.[189] The Illinois Commission further contends that in establishing standards for state commissions to apply during arbitration under section 252(b), subsections 252(c)(1) and 252(c)(2) distinguish between section 251 and the Commission's regulations prescribed thereunder, and the pricing standards set forth in section 252(d), which do not reference any Commission regulations.[190] The Illinois Commission infers from these subsections that Congress did not intend for the Commission to exercise broad rulemaking authority under sections 251 and 252.[191] Other state commissions similarly argue that the general language of section 251(c)(2)(D) and the specific grant of authority to states under section 252(d) to price interconnection elements reveal Congress's intent to confer responsibility over pricing on the states.[192]

109. *National Standards.* The Department of Justice, the SBA, and most of the IXCs, CAPs, and cable companies addressing this issue agree that the Commission should establish national pricing rules for interconnection and unbundled elements under 252(d)(1) for the reasons stated in the NPRM.[193] Citizens Utilities, NEXTLINK, and WinStar also support the

[187] Ohio Commission comments at 36-39.

[188] Illinois Commission comments at 7.

[189] *Id.*

[190] *Id.* at 8, 41.

[191] *Id.*

[192] Colorado Commission comments at 10; Pennsylvania Commission comments at 10-11, 26-27; Virginia Commission comments at 2-3; Mass. Commission comments at 4; Arizona Commission comments at 18.

[193] *See, e.g.*, DoJ comments at 25-26; SBA comments at 4; LDDS comments at 19-20, 58; AT&T comments at 45; LCI comments at 3, 12; MCI comments at 59; Sprint comments at 42, reply at 5-11; CompTel comments at 19-22; Vartec, *et al.* comments at 10 (national pricing standards for databases); ALTS comments at 33; Teleport comments at 45-46, reply at 32; Hyperion comments at 3, reply at 5-6; ASCI comments at 51-53; Intermedia comments at 14; MFS comments at 52-54, 58, 64; Cable & Wireless comments at 32; Cox comments at 12, 22, reply at 5, 13-16; Comcast comments at 44; Continental comments at 16; TCI comments at 22-24, reply at 1-3; Jones Intercable comments at 2-4, reply at 3, 9; Time Warner comments at 47, reply at 2, 7-9; *see also*

Commission's tentative conclusion that national pricing rules should be adopted to guide the states in facilitating the negotiation and arbitration process.[194] The majority of consumer organizations urge the Commission to establish uniform, national rules and argue that inconsistent and unpredictable state rules would inhibit or delay the efforts of new entrants to obtain interconnection arrangements with incumbent LECs and undermine their ability to raise capital in the financial markets.[195] Several state commissions also support the adoption of national rules. For example, the Kentucky Commission contends that national pricing rules would facilitate competitive entry,[196] and the North Dakota Commission argues that such national rules would provide significant assistance to those states that have not opened their local markets to competition.[197]

110. The RBOCs, with the exception of Ameritech, generally oppose the adoption of national pricing rules on legal and policy grounds.[198] The majority of states also express opposition to national pricing rules and argue that section 251(d)(3) reserves to the states the details of local service competition.[199] Other state commissions advocate that the Commission

Vanguard reply at 3, 7-9.

[194] *See, e.g.*, Citizens Utilities comments at 15-16; NEXTLINK comments at 24-25; WinStar comments at 28; *see also* CompTel comments at 19-20.

[195] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 3-4, 11, 29-32; SDN Users Ass'n comments at 2; CFA/CU comments at 26; Competition Policy Institute comments at 9-10, reply at 10; *see also* ITIC comments at 3-5; TRACER comments at 3-4, reply at 6; NTIA reply at 15-16.

[196] *See, e.g.*, Kentucky Commission comments at 4; *see also* Texas Public Utility Counsel comments at 15.

[197] *See, e.g.*, North Dakota Commission comments at 1-2.

[198] *See, e.g.*, NYNEX comments at 40-41; SBC comments at 48, 50, reply at 29, 33; PacTel comments at 2, 8, 64, and 65, reply at 23; BellSouth comments at 49, 55, reply at 33; Ameritech comments at 59 (favoring national pricing principles that allow incumbent LECs to recover all costs); *see also* Cincinnati Bell comments at 20 (supporting FCC rules, but arguing that rules should only be general and for the purpose of guiding states in the negotiation and arbitration process).

[199] *See, e.g.*, Ohio Commission comments at 39-40; Colorado Commission comments at 28, reply at 4-6; Wyoming Commission comments at 20, 27-29; Minnesota reply at 2-3; Maryland Commission comments at 12; New York Commission comments at 11-12, reply at 9-10; Georgia Commission comments at 7, reply at 1; Indiana Commission comments at 2, 21; Alaska Commission comments at 4; Missouri Commission comments at 8; Oregon Commission comments at 30; Alabama Commission comments at 20-21; North Carolina Commission comments at 10; Maine Commission, *et al.* comments at 2-3; California Commission comments at 11-12, reply at 18; Arizona Commission comments at 19; Connecticut Commission comments at 9-10; Washington Commission reply at 2; New Hampshire Commission, *et al.* reply at 2-3; Mississippi Commission comments at 13; Pennsylvania Commission comments at 26; NARUC comments at 23, 24, reply at 12-13; Florida Commission comments at 25; *see also* Ohio Consumers' Counsel comments at 21, 27; MECA comments at 39-41; Municipal Utilities comments at 17-18, reply at 7; Attorneys General, *et al.* reply at 2, 7; Puerto Rico Tel. comments at 5-6; reply at 9-10; Alaska Tel. Ass'n comments at 2.

should adopt either preferred outcomes for interconnection that narrow the range of issues in arbitration and negotiation,[200] or general nonbinding guidelines that recognize the rights of states to adopt their own pricing standards.[201] For instance, the Illinois Commission contends that, if the Commission finds that it has authority to establish pricing rules to govern the states, it could determine that rates for interconnection and unbundled network elements are to be based upon forward-looking costs rather than historical costs, and leave all other details to the states. In addition, the Illinois Commission argues that any pricing standards that the Commission prescribes should be focused narrowly on those services addressed in section 252(d).[202] The Iowa Commission maintains that the Commission's rules may be explicit only to the extent that they prohibit state policies that are inconsistent with section 251.[203] Some incumbent LEC trade associations suggest that the Commission adopt only broad guidelines and minimum pricing requirements.[204] NADO, Joint Consumer Advocates, and the Rural Tel. Coalition oppose the adoption of any national pricing rules on the ground that such a regime would not allow for flexibility and innovation.[205] The Rural Tel. Coalition further asserts that if the Commission insists on prescribing pricing standards for all states, it must take into account the myriad of different classes of customers, geographic characteristics, population densities, and technologies.[206]

3. Discussion

111. In adopting sections 251 and 252, we conclude that Congress envisioned complementary and significant roles for the Commission and the states with respect to the

[200] *See* Washington Commission comments at 2.

[201] *See, e.g.*, Pennsylvania Commission comments at 28; South Carolina Commission comments at 3; Illinois Commission comments at 41, reply at 12-13; Washington Commission comments at 2, 22; *see also* NYNEX comments at 42.

[202] *See* Illinois Commission comments at 41-43.

[203] *See* Iowa Commission comments at 5.

[204] *See, e.g.*, NECA comments at 6; USTA comments at 37; *see also* George Washington Urban League comments at 2; Alliance for Public Technology comments at 9-11, reply at 1; ALLTEL comments at 4-7, reply at summary.

[205] *See* NADO, *et al.* at 4, 6; Joint Consumer Advocates reply at 9-10; Rural Tel. Coalition comments at 19, reply at 13-14.

[206] Rural Tel. Coalition comments at 19, reply at 14.

rates for section 251 services, interconnection, and access to unbundled elements.[207] We interpret the Commission's role under section 251 as ensuring that rates are just, reasonable, and nondiscriminatory: in doing so, we believe it to be within our discretion to adopt national pricing rules in order to ensure that rates will be just, reasonable, and nondiscriminatory. The Commission is also responsible for ensuring that interconnection, collocation, access to unbundled elements, resale services, and transport and termination of telecommunications are reasonably available to new entrants.[208] The states' role under section 252(c) is to establish specific rates when the parties cannot agree, consistent with the regulations prescribed by the Commission under sections 251(d)(1) and 252(d).

112. While we recognize that sections 201 and 202 create a very different regulatory regime from that envisioned by sections 251 and 252, we observe that Congress used terms in section 251, such as the requirement that rates, terms, and conditions be "just, reasonable, and nondiscriminatory," that are very similar to language in sections 201 and 202. This lends additional support for the proposition that Congress intended to give us authority to adopt rules regarding the justness and reasonableness of rates pursuant to section 251, comparable in some respects to the authority Congress gave us pursuant to sections 201 and 202.

113. We believe that national pricing rules are a critical component of the interconnection regime set out in sections 251 and 252. Congress intended these sections to promote opportunities for local competition, and directed us to establish regulations to ensure that rates under this regime would be economically efficient. This, in turn, should reduce potential entrants' capital costs, and should facilitate entry by all types of service providers, including small entities.[209] Further, we believe that national rules will help states review and arbitrate contested agreements in a timely fashion. From August to November and beyond, states will be carrying the tremendous burden of setting specific rates for interconnection and network elements, for resale, and for transport and termination when parties bring these issues before them for arbitration. As discussed in more detail below, we are setting forth default proxies for states to use if they are unable to set these rates using the necessary cost studies within the statutory time frame. After that, both we and the states will need to review the level of competition, revise our rules as necessary, and reconcile arbitrated interconnection arrangements to those revisions on a going-forward basis.

114. We believe that national rules should reduce the parties' uncertainty about the outcome that may be reached by different states in their respective regulatory proceedings,

[207] *See infra*, Sections VII and VIII.

[208] For a further discussion of specific pricing rules, *see infra*, Section VII.

[209] *See* Regulatory Flexibility Act, 5 U.S.C. § 601 *et seq*.

which will reduce regulatory burdens for all parties including small incumbent LECs and small entities. A national regime should also help to ensure consistent federal court decisions on review of specific state orders under sections 251 and 252.[210] In addition, under the national pricing rules that we adopt for interconnection and unbundled network elements, states will retain the flexibility to consider local technological, environmental, regulatory, and economic conditions. Failure to adopt national pricing rules, on the other hand, could lead to widely disparate state policies that could delay the consummation of interconnection arrangements and otherwise hinder the development of local competition. Lack of national rules could also provide opportunities for incumbent LECs to inhibit or delay the interconnection efforts of new competitors, and create great uncertainty for the industry, capital markets, regulators, and courts as to what pricing policies would be pursued by each of the individual states, frustrating the potential entrants' ability to raise capital. In sum, we believe that the pricing of interconnection, unbundled elements, resale, and transport and termination of telecommunications is important to ensure that opportunities to compete are available to new entrants.

115. As we observed in the NPRM,[211] section 251 explicitly sets forth certain requirements regarding rates for interconnection, access to unbundled elements, and related offerings. Sections 251(c)(2) and (c)(3) require that incumbent LECs' "*rates*, terms, and conditions" for interconnection and unbundled network elements be "just, reasonable, and nondiscriminatory in accordance with . . . the requirements of sections 251 and 252."[212] Section 251(c)(4) requires that incumbent LECs offer "for resale at wholesale *rates* any telecommunications service that the carrier provides at retail to subscribers who are not telecommunications carriers," without unreasonable conditions or limitations.[213] Section 251(c)(6) provides that all LECs must provide physical collocation of equipment, "on *rates*, terms, and conditions that are just, reasonable, and nondiscriminatory."[214] Section 251(b)(5) requires that all LECs "establish reciprocal *compensation* arrangements for the transport and termination of telecommunications."[215] Section 251(d)(1) further expressly directs the

[210] *See* 47 U.S.C.§ 252(e)(6).

[211] NPRM at para. 117.

[212] 47 U.S.C. §§ 251(c)(2) and (c)(3) (emphasis added).

[213] 47 U.S.C. § 251(c)(4) (emphasis added).

[214] 47 U.S.C. § 251(c)(6) (emphasis added).

[215] 47 U.S.C. § 251(b)(5) (emphasis added).

Commission, without limitation, to "complete all actions necessary to implement the requirements of [section 251]."[216]

116. Section 252 generally sets forth the procedures that state commissions, incumbent LECs, and new entrants must follow to implement the requirements of section 251 and establish specific interconnection arrangements. Section 252(c)(1) provides that "in resolving by arbitration . . . any open issues and imposing conditions upon the parties to the agreement, a State commission shall . . . ensure that such resolution and conditions meet the requirements of section 251, *including the regulations prescribed by the Commission pursuant to section 251*."[217]

117. We conclude that, under section 251(d)(1), Congress granted us broad authority to complete all actions necessary to implement the requirements of section 251, including actions necessary to ensure that rates for interconnection, access to unbundled elements, and collocation are "just, reasonable, and nondiscriminatory."[218] We also determine that the statute grants us the authority to define reasonable "wholesale rates" for purposes of services to be resold, and "reciprocal compensation" for purposes of transport and termination of telecommunications.[219] The argument advanced by the New York Commission, NARUC, and others that the Commission's implementing authority under section 251(d)(1) is limited to those provisions in section 251 that mandate specific Commission rules, such as prescribing regulations for number portability, unbundling, and resale, reads into section 251(d)(1) limiting language that the section does not contain. Congress did not confine the Commission's rulemaking authority to only those matters identified in sections 251(b)(2), 251(c)(4)(B), and 251(d)(2), and there is no basis for inferring such an implicit limitation. A narrow reading of section 251(d)(1), as proposed by the New York Commission, NARUC, and others, would require the Commission to neglect its statutory duty to implement the provisions of section 251 and to promote rapid competitive entry into local telephone markets.

118. We also reject the arguments raised by several state commissions that the language in section 252(c) indicates Congress's intent for the Commission to have little or no authority with respect to pricing of interconnection, access to unbundled elements, and collocation. We do not believe that the statutory directive that state commissions establish rates according to section 252(d) restricts our authority under section 251(d)(1). States must

[216] 47 U.S.C. § 251(d)(1).

[217] 47 U.S.C. § 252(c)(1) (emphasis added).

[218] *See* 47 U.S.C. §§ 251(c)(2), (c)(3), and (c)(6).

[219] *See* 47 U.S.C. §§ 251(b)(5) and (c)(4).

comply with both the statutory standards under section 252(d) *and* the regulations prescribed by the Commission pursuant to section 251 when arbitrating rate disputes or when reviewing BOC statements of generally available terms. Section 252(c) enumerates three requirements that states must follow in arbitrating issues.[220] These requirements are not set forth in the alternative; rather, states must comply with all three.

119. We further reject the argument that section 251(d)(3) restricts the Commission's authority to establish national pricing regulations. Section 251(d)(3) provides that the Commission shall not preclude the enforcement of any regulation, order, or policy of a state commission that, *inter alia*, is consistent with the requirements of section 251 and does not substantially prevent implementation of the requirements of section 251. This subsection, as discussed in section II.C., *supra*, is intended to allow states to adopt regulations that are not inconsistent with the Commission's rules; it does not address state policies that are inconsistent with the pricing rules established by the Commission.

120. We also address the impact of our rules on small incumbent LECs. For example, Rural Tel. Coalition argues that rigid rules, based on the properties of large urban LECs, cannot blindly be applied to small and rural LECs.[221] As discussed above, however, we believe that states will retain sufficient flexibility under our rules to consider local technological, environmental, regulatory, and economic conditions. We also note that section 251(f) may provide relief to certain small carriers.[222]

E. Authority to Take Enforcement Action

1. Background

121. The Commission's implementation of section 251 must be given full effect in arbitrated agreements and incorporated into all such agreements. There is judicial review of such arbitrated agreements, and one issue surely will be the adherence of these agreements to our rules. The Commission will have the opportunity to participate, upon request by a party or a state or by submitting an *amicus* filing, in the arbitration or the judicial review thereof. To clarify our potential role, we consider the extent of the Commission's authority to review and enforce agreements entered into pursuant to section 252. Section 252(e)(6) provides that, in "any case in which a State commission makes a determination under this section, any party aggrieved by such determination may bring an action in an appropriate Federal district court

[220] *See* 47 U.S.C. §§ 252(c)(1), (c)(2), and (c)(3).

[221] Rural Tel. Coalition reply at 14.

[222] *See* 47 U.S.C. § 251(f).

to determine whether the agreement or statement meets the requirements of section 251 and this section."[223]

122. In the NPRM, we sought comment on the relationship between sections 251 and 252 and the Commission's existing authority under section 208(a), which allows any person to file a complaint with the Commission regarding "anything done or omitted to be done by any common carrier subject to this Act, in contravention of the provisions thereof . . ."[224] We asked whether section 208 gives the Commission authority over complaints alleging violations of requirements set forth in sections 251 or 252. We also sought comment on the relationship between sections 251 and 252 and any other applicable Commission enforcement authority. We further sought comment on how we might increase the effectiveness of the Commission's enforcement mechanisms. Specifically, we asked for comment on how private rights of action might be used under the Act, and the Commission's role in speeding dispute resolution in forums used by private parties.

2. Comments

123. The majority of commenters agree that the Commission's section 208 complaint authority extends to the acts or omissions of common carriers in contravention of sections 251 and 252.[225] TCI further asserts that the Commission retains authority to issue declaratory rulings pursuant to the Administrative Procedure Act, 5 U.S.C. 554(e), and to initiate investigations pursuant to section 403 of the Communications Act.[226] Several state commissions argue, however, that allowing parties to file section 208 complaints would be inconsistent with the states' preeminent role under sections 251 and 252, at least in some circumstances. For example, the New York Commission contends that, to the extent that sections 251 and 252 apply to both interstate and intrastate services, the FCC only has authority to hear complaints regarding interstate communications.[227] The Illinois Commission asserts that a section 208 remedy would be appropriate only after an agreement is

[223] 47 U.S.C. § 252(e)(6).

[224] *See* 47 U.S.C. § 208; *see also* NPRM at para. 41.

[225] *See, e.g.*, ALTS comments at 7; AT&T comments at 10-11; BellSouth comments at 9; CompTel comments at 103; Florida Commission comments at 10-11; Ind. Cable & Telecomm. Ass'n reply at 4; Jones Intercable comments at 13-14; MCI comments at 7-8; MFS comments at 8-9; Ohio Commission comments at 17; Sprint comments at 8-9; TCI comments at 10; TCC comments at 62.

[226] TCI comments at 10.

[227] New York Commission reply; *see also* Wyoming Commission comments at 15-16.

implemented, and only to the extent the complaint does not allege that the agreement violates standards set forth in sections 251 and 252.[228]

3. Discussion

124. Consistent with our decision in *Telephone Number Portability*[229] and the views of most commenters, we conclude that parties have several options for seeking relief if they believe that a carrier has violated the standards under section 251 or 252. Pursuant to section 252(e)(6), a party aggrieved by a state commission arbitration determination under section 252 has the right to bring an action in federal district court.[230] Federal district courts may choose to stay or dismiss proceedings brought pursuant to section 252(e)(6), and refer issues of compliance with the substantive requirements of sections 251 and 252 to the Commission under the primary jurisdiction doctrine.[231] We find, however, that federal court review is not the exclusive remedy regarding state determinations under section 252. The 1996 Act is clear when it intends for a remedy to be exclusive. For example, section 252(e)(6) provides that, if a state commission fails to act, as described in section 252(e)(5), "the proceeding by the Commission under [section 252(e)(5)] and any judicial review of the Commission's actions *shall be the exclusive remedies* for a State commission's failure to act."[232] In contrast, the succeeding sentence in section 252(e)(6) provides that any party aggrieved by a state commission determination under section 252 "*may* bring an action in an appropriate Federal district court . . . ."[233]

125. The Commission also stands ready to provide guidance to states and other parties regarding the statute and our rules. In addition to the informal consultations that we hope to continue with state commissions, they or other parties may at any time seek a declaratory

[228] Illinois Commission comments at 16-18.

[229] *See Number Portability Order*.

[230] Commenters also suggest that the statute's provision for federal district court review of state public utility commission decisions is inconsistent with the 11th Amendment. That issue is not properly before the Commission since it is the federal courts that will have to determine the scope of their jurisdiction and in any case "regulatory agencies are not free to declare an act of Congress unconstitutional." *See Meredith Corp. v. FCC*, 809 F.2d 863, 873 (D.C. Cir. 1987).

[231] *See Reiter v. Cooper*, 507 U.S. 258, 268-269 (1993); *Allnet Comm. Servs. v. National Exchange Carrier Ass'n*, 965 F.2d 1118 (D.C. Cir. 1992); *see also* TCC Comments at 61.

[232] 47 U.S.C. § 252(e)(6) (emphasis added).

[233] *Id.* (emphasis added).

ruling where necessary to remove uncertainty or eliminate a controversy.[234] Because section 251 is critical to the development of competitive local markets, we intend to act expeditiously on such requests for declaratory rulings.

126. We further conclude that section 252(e)(6) does not divest the Commission of jurisdiction, in whole or in part, over complaints that a common carrier violated section 251 or 252 of the Act. Section 601(c)(1) of the 1996 Act provides that the 1996 Act "shall not be construed to modify, impair or supersede" existing federal law -- which includes the section 208 complaint process -- "unless expressly so provided."[235] Sections 251 and 252 do not divest the Commission of its section 208 complaint authority.

127. An aggrieved party could file a section 208 complaint with the Commission, alleging that the incumbent LEC or requesting carrier has failed to comply with the requirements of sections 251 and 252, including Commission rules thereunder, even if the carrier is in compliance with an agreement approved by the state commission. Alternatively, a party could file a section 208 complaint alleging that a common carrier is violating the terms of a negotiated or arbitrated agreement. We plan to initiate a proceeding to adopt expedited procedures for resolving complaints filed pursuant to section 208.

128. We note that, in acting on a section 208 complaint, we would not be directly reviewing the state commission's decision, but rather, our review would be strictly limited to determining whether the common carrier's actions or omissions were in contravention of the Communications Act.[236] Thus, consistent with our past decisions in analogous contexts,[237] we conclude that a person aggrieved by a state determination under sections 251 and 252 of the Act may elect to either bring an action for federal district court review or a section 208 complaint to the Commission against a common carrier. Such a person could, as a further alternative, pursuant to section 207, file a complaint against a common carrier with the

[234] *See* 47 C.F.R. § 1.2 (the Commission, in accordance with section 5(d) of the Administrative Procedures Act, 5. U.S.C. § 554(e), may issue a declaratory ruling terminating a controversy or removing uncertainty).

[235] Telecommunications Act of 1996, § 601(c)(1).

[236] While we would have authority to review such complaints, we note that we might decline, at least in some instances, to impose financial penalties upon a common carrier that is acting pursuant to state requirements or authorization, even if we sustain the allegations in the complaint.

[237] *See Number Portability Order, supra*; *Freemon v. AT&T*, 9 FCC Rcd 4032, 4033 (1994) (provision permitting persons aggrieved by violation of prohibition against unauthorized publication of certain communications to "bring a civil action in United States district court or any other court of competent jurisdiction" did not bar a complaint under section 208 of the Communications Act); *see also Policies Governing the Provision of Shared Telecommunications Service*, 3 FCC Rcd 6931 (1988) (the section 208 complaint process is available to resolve any specific problems that might arise regarding shared telecommunications service regulation by a state that impinges upon a federal interest).

Commission or in federal district court for the recovery of damages.[238] We are unlikely, in adjudicating a complaint, to examine the consistency of a state decision with sections 251 and 252 if a judicial determination has already been made on the issues before us.[239]

129. Finally, we clarify, as one commenter requested,[240] that nothing in sections 251 and 252 or our implementing regulations is intended to limit the ability of persons to seek relief under the antitrust laws, other statutes, or common law. In addition, in appropriate circumstances, the Commission could institute an inquiry on its own motion, 47 U.S.C. § 403, initiate a forfeiture proceeding, 47 U.S.C. § 503(b), initiate a cease-and-desist proceeding, 47 U.S.C. § 312(b), or in extreme cases, consider initiating a revocation proceeding for violators with radio licenses, 47 U.S.C. § 312(a), or referring violations to the Department of Justice for possible criminal prosecution under 47 U.S.C. § 501, 502 & 503(a).

F. Regulations of BOC Statements of Generally Available Terms

130. We noted in the NPRM that section 251 and our implementing regulations govern the states' review of BOC statements of generally available terms and conditions,[241] as well as arrangements reached through compulsory arbitration pursuant to section 252(b).[242] We tentatively concluded that we should adopt a single set of standards with which both arbitrated agreements and BOC statements of generally available terms must comply.

131. Only a few commenters addressed this issue, and most concurred with the tentative conclusion that we should apply the same requirements to both arbitrated agreements and BOC statements of generally available terms.[243] The Illinois Commission, for example, asserts that, "[s]ince the generally available terms could be viewed as a baseline against which to craft arbitrated arrangements, it is reasonable to hold both arbitrated agreements and the

[238] *See* 47 U.S.C. § 207.

[239] *Town of Deerfield v. FCC*, 992 F.2d 420, 428-430 (2d Cir. 1993).

[240] *See* MCI comments at 9.

[241] *See* 47 U.S.C. §§ 252(f) and 271(c)(2)(B).

[242] NPRM at para. 36 (*citing* 47 U.S.C. §§ 252(b), (f)).

[243] ACTA comments at 4; Arch comments at 5; BellSouth comments at 7; CompTel comments at 105; Illinois Commission comments at 14; MCI comments at 7; Sprint comments at 8.

BOC statements of generally available terms to the same standards."[244] CompTel asserts that, particularly if states require incumbent LECs to tariff the terms and conditions in agreements that are subject to arbitration, there will be few if any distinctions between arbitrated agreements and generally available terms and conditions.[245]

132. We hereby find that our tentative conclusion that we should apply a single set of standards to both arbitrated agreements and BOC statements of generally available terms is consistent with both the text and purpose of the 1996 Act. BOC statements of generally available terms are relevant where a BOC seeks to provide in-region interLATA service, and the BOC has not negotiated or arbitrated an agreement. Therefore, such statements are to some extent a substitute for an agreement for interconnection, services, or access to unbundled elements. We also find no basis in the statute for establishing different requirements for arbitrated agreements and BOC statements of generally available terms. Moreover, a single set of requirements will substantially ease the burdens of state commissions and the FCC in reviewing agreements and statements of generally available terms pursuant to sections 252 and 271.

G. States' Role in Fostering Local Competition Under Sections 251 and 252

133. As already referenced, states will play a critical role in promoting local competition, including by taking a key role in the negotiation and arbitration process. We believe the negotiation/arbitration process pursuant to section 252 is likely to proceed as follows. Initially, the requesting carrier and incumbent LEC will seek to negotiate mutually agreeable rates, terms, and conditions governing the competing carrier's interconnection to the incumbent's network, access to the incumbent's unbundled network elements, or the provision of services at wholesale rates for resale by the requesting carrier. Either party may ask the relevant state commission to mediate specific issues to facilitate an agreement during the negotiation process.

134. Because the new entrant's objective is to obtain the services and access to facilities from the incumbent that the entrant needs to compete in the incumbent's market, the negotiation process contemplated by the 1996 Act bears little resemblance to a typical commercial negotiation. Indeed, the entrant has nothing that the incumbent needs to compete with the entrant, and has little to offer the incumbent in a negotiation. Consequently, the 1996 Act provides that, if the parties fail to reach agreement on all issues, either party may seek arbitration before a state commission. The state commission will arbitrate individual issues specified by the parties, or conceivably may be asked to arbitrate the entire agreement.

[244] Illinois Commission comments at 14.

[245] Comptel comments at 105.

In the event that a state commission must act as arbitrator, it will need to ensure that the arbitrated agreement is consistent with the Commission's rules. In reviewing arbitrated and negotiated agreements, the state commission may ensure that such agreements are consistent with applicable state requirements.

135. Under the statutory scheme in sections 251 and 252, state commissions may be asked by parties to define specific terms and conditions governing access to unbundled elements, interconnection, and resale of services beyond the rules the Commission establishes in this Report and Order. Moreover, the state commissions are responsible for setting specific rates in arbitrated proceedings. For example, state commissions in an arbitration would likely designate the terms and conditions by which the competing carrier receives access to the incumbent's loops. The state commission might arbitrate a description or definition of the loop, the term for which the carrier commits to the purchase of rights to exclusive use of a specific network element, and the provisions under which the competing carrier will order loops from the incumbent and the incumbent will provision an order. The state commission may establish procedures that govern should the incumbent refurbish or replace the element during the agreement period, and the procedures that apply should an end user customer decide to switch from the competing carrier back to the incumbent or a different provider. In addition, the state commission will establish the rates an incumbent charges for loops, perhaps with volume and term discounts specified, as well as rates that carriers may charge to end users.

136. State commissions will have similar responsibilities with respect to other unbundled network elements such as the switch, interoffice transport, signalling and databases. State commissions may identify network elements to be unbundled, in addition to those elements identified by the Commission, and may identify additional points at which incumbent LECs must provide interconnection, where technically feasible. State commissions are responsible for determining when virtual collocation may be provided instead of physical collocation, pursuant to section 251(c)(6). States also will determine, in accordance with section 251(f)(1), whether and to what extent a rural incumbent LEC is entitled to continued exemption from the requirements of section 251(c) after a telecommunications carrier has made a bona fide request under section 251. Under section 251(f)(2), states will determine whether to grant petitions that may be filed by certain LECs for suspension or modification of the requirements in sections 251(b) or (c).

137. The foregoing is a representative sampling of the role that states will have in steering the course of local competition. State commissions will make critical decisions concerning a host of issues involving rates, terms, and conditions of interconnection and unbundling arrangements, and exemption, suspension, or modification of the requirements in section 251. The actions taken by a state will significantly affect the development of local competition in that state. Moreover, actions in one state are likely to influence other states,

and to have a substantial impact on steps the FCC takes in developing a pro-competitive national policy framework.

III. DUTY TO NEGOTIATE IN GOOD FAITH

A. Background

138. Section 251(c)(1) of the statute imposes on incumbent LECs the "duty to negotiate in good faith in accordance with section 252 the particular terms and conditions of agreements to fulfill the duties described" in sections 251(b) and(c), and further provides that "(t)he requesting telecommunications carrier also has the duty to negotiate in good faith the terms and conditions of such agreements."[246] In the NPRM, we asked parties to comment on the extent to which the Commission should establish national rules defining the requirements of the good faith negotiation obligation.

B. Advantages and Disadvantages of National Rules

1. Comments

139. Some potential new entrants and other parties assert that clear national guidelines will prevent incumbent LECs from abusing their bargaining power for the purpose of undermining efforts to eliminate barriers to competition.[247] Some parties also assert that, in the absence of specific rules, negotiations between potential competitors are likely to be needlessly prolonged and contentious.[248] SBA claims that delay and other anticompetitive tactics are particularly burdensome on small businesses.[249] In addition, Independent Cable & Telecommunications Ass'n expresses concern that states might establish guidelines that favor the incumbent.[250] Other parties agree that national rules defining some limited aspects of good faith can simplify both negotiations and dispute resolution, but nevertheless contend that

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[246] 47 U.S.C. § 251(c)(1).

[247] *See, e.g.*, AT&T comments at 86-88; CEDRA comments at 1-9; TCC comments at 7-13.

[248] *See, e.g.*, ACSI comments at 7-11; AT&T comments at 86-88; Centennial Cellular Corp. comments at 2-10; Cox comments at 43-46; NCTA comments at 59-63.

[249] SBA comments at 8.

[250] Ind. Cable & Telecomm. Ass'n reply at 7.

the Commission should not establish extensive or detailed rules in this area, because the facts and tactics of various negotiations will display only a few characteristics in common.[251]

140. Some incumbent LECs and other parties contend that the FCC need not establish any rules regarding good faith negotiation, because the statute builds in a remedy of arbitration for parties that are dissatisfied with the negotiation process.[252] They maintain that national rules are inappropriate because a determination of whether a party has acted in good faith requires examination of specific facts that will not describe a pattern across the country.[253] SBC contends that national standards are inflexible, and thus will slow down the negotiation process, and that national rules are unnecessary, because the 1996 Act provides incentives for incumbents to negotiate.[254] Some parties also claim that section 252(b)(5) sets forth standards for good faith negotiation, and that provision makes no mention of a role for the FCC.[255]

2. Discussion

141. We conclude that establishing some national standards regarding the duty to negotiate in good faith could help to reduce areas of dispute and expedite fair and successful negotiations, and thereby realize Congress's goal of enabling swift market entry by new competitors. In order to address the balance of the incentives between the bargaining parties, however, we believe that we should set forth some minimum requirements of good faith negotiation that will guide parties and state commissions. As discussed above, the requirements in section 251 obligate incumbent LECs to provide interconnection to competitors that seek to reduce the incumbent's subscribership and weaken the incumbent's dominant position in the market. Generally, the new entrant has little to offer the incumbent. Thus, an incumbent LEC is likely to have scant, if any, economic incentive to reach agreement. In addition, incumbent LECs argue that requesting carriers may have incentives to

[251] *See, e.g.*, Georgia Commission comments at 6; Pennsylvania Commission comments at 19-20; SBA comments at 9; Sprint comments at 10-11; Attorneys General reply at 12-13.

[252] BellSouth comments at 10-11; Texas Commission comments at 6-8; USTA comments at 8; *see also* District of Columbia Commission comments at 14-17.

[253] *See, e.g.*, Bell Atlantic comments at 47 (*citing Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation*, WT Docket 95-157, Notice of Proposed Rulemaking, FCC 96-196 (rel. Apr. 30. 1996)); Citizens Utilities comments at 6; Illinois Commission comments at 20-21; Ohio Commission comments at 21.

[254] SBC comments at 12-15.

[255] Citizens Utilities comments at 6; SBC comments at 7, 20.

make unreasonable demands or otherwise fail to act in good faith.[256] The fact that an incumbent LEC has superior bargaining power does not itself demonstrate a lack of good faith, or ensure that a new entrant will act in good faith.

142. We agree with commenters that it would be futile to try to determine in advance every possible action that might be inconsistent with the duty to negotiate in good faith. As discussed more fully below, determining whether or not a party's conduct is consistent with its statutory duty will depend largely on the specific facts of individual negotiations. Therefore, we believe that it is appropriate to identify factors or practices that may be evidence of failure to negotiate in good faith, but that will need to be considered in light of all relevant circumstances.

143. Consistent with our discussion in Section II, above, we believe that the Commission has authority to review complaints alleging violations of good faith negotiation pursuant to section 208.[257] Penalties may be imposed under sections 501, 502 and 503 for failure to negotiate in good faith. In addition, we believe that state commissions have authority, under section 252(b)(5), to consider allegations that a party has failed to negotiate in good faith. We also reserve the right to amend these rules in the future as we obtain more information regarding negotiations under section 252.

C. Specific Practices that May Constitute a Failure to Negotiate in Good Faith

1. Comments

144. The comments included numerous suggestions regarding what might constitute a violation of the duty to negotiate in good faith. Commenters disagree about whether requiring another party to sign a nondisclosure agreement constitutes failure to negotiate in good faith. Some parties urge the Commission to prohibit nondisclosure agreements altogether,[258] but other parties assert that there may be legitimate reasons to seek nondisclosure.[259] Some parties assert that the Commission should only prohibit overly broad or restrictive nondisclosure agreements, such as agreements that cover information that is not commercially sensitive, or

[256] *See e.g.*, Bell Atlantic comments at 49; U S West comments at 40-42.

[257] We previously have held that parties may raise allegations regarding good faith negotiation pursuant to section 208. *Cellular Interconnection Proceeding*, 4 FCC Rcd 2369, 2371 (1989). The Commission also held in that case that "the conduct of good faith negotiations is not jurisdictionally severable." *Id.* at 2371.

[258] *See, e.g.*, LCI comments at 24; SBA comments at 9; TCI comments at 24.

[259] *See, e.g.*, Bell Atlantic comments at 48-49; GVNW comments at 3-4; Illinois Commission comments at 21; Sprint comments at 11-12; USTA comments at 8 n.11; U S West comments at 39-40.

that require withholding information from regulatory agencies.[260] Some potential competitors also propose that incumbents should not be permitted to refuse to negotiate until a requesting carrier signs a nondisclosure agreement.[261]

145. Commenters assert that other practices constitute a violation of the duty to negotiate in good faith. For example, most commenters on this issue agree that demands that a party limit its legal rights or remedies signal a lack of good faith.[262] Many new entrants also assert that actions that have the purpose or effect of delaying or impeding negotiations constitute failure to negotiate in good faith. For example, GST asserts parties should be required to respond within a reasonable time to a request to begin negotiations.[263] Some parties also claim that failing to respond to a proposal or participate meaningfully and with the intention of reaching agreement demonstrates a lack of good faith.[264] For instance, Time Warner contends that a party may not simply present proposals that do not include critical terms, or that it knows are unacceptable.[265] Parties also maintain that establishing preconditions, such as requiring requesting carriers to complete unnecessary forms before beginning negotiations, should be prohibited.[266]

[260] *See, e.g.*, GST comments at 5; MFS comments at 10-14; TCC comments at 9 (very broad nondisclosure agreements puts the incumbent in a powerful position, because it has information about numerous companies and the competitor does not have access to that same information); Teleport comments at 5-10; Texas Commission comments at 6-8.

[261] *See, e.g.*, ACTA comments at 6-7; Arch comments at 9-10; ITIC comments at 7-8; NCTA comments at 59-63; Teleport comments at 5-10; *accord* Washington Commission comments at 12.

[262] *See, e.g.*, ACTA comments at 6-7; Illinois Commission comments at 21; SBA comments at 9; Sprint comments at 11; TCI comments at 24; Washington Commission comments at 12.

[263] GST comments at 5; *accord* ACSI comments at 7-11; Bell Atlantic comments at 49 (refusing to schedule negotiations after making a request demonstrates bad faith); MFS comments at 10-14; Time Warner comments at 22-23.

[264] MFS comments at 10-14; Time Warner comments at 22-23.

[265] Time Warner comments at 22.

[266] ALTS comments at 12; AT&T comments at 86-88; Cox comments at 45-46; Excel comments at 8-9; Intelcom comments at 3-13; ITIC comments at 7-8; MFS comments at 10-14; LCI comments at 23; NCTA comments at 59-60; Time Warner comments at 22; Washington Commission comments at 12; NTIA reply at 6 n.14.

146. New entrants argue that the failure of an incumbent LEC to provide information necessary to conduct meaningful negotiations constitutes a refusal to negotiate in good faith.[267] Incumbent LECs similarly assert that requesting carriers should be required to provide certain information necessary to respond to their requests. For example, U S West states that an incumbent should be able to require a carrier that seeks interconnection to disclose what it wants to obtain, where, when, and for what duration.[268] U S West contends that a requesting carrier should not be permitted to demand immediate unbundling or interconnection, thereby forcing the incumbent to incur costs, while refusing to provide a proposed purchase and deployment schedule. Some incumbent LECs advocate a "bona fide request" requirement for all interconnection requests.[269] Under such a requirement, a requesting carrier would have to: (1) certify that it will make use of the services or facilities it requests within a specified period from the date of the request; (2) describe the purpose of the request; (3) specify precisely what it was requesting; and (4) agree to purchase the requested services or facilities for a minimum time. Other parties specifically object to a "bona fide request" requirement. For example, LCI states that such a requirement would force a carrier to agree to purchase services or facilities before prices and other terms and conditions have been established.[270]

147. Other practices to which some commenters object include a refusal to negotiate any proposed term or condition, or conditioning negotiation on one issue upon first reaching agreement on another issue.[271] Time Warner contends, for example, that parties should not be permitted to require agreement on non-price terms before beginning to negotiate prices.[272] Time Warner also contends that it is a failure to negotiate in good faith to link negotiations under section 252 with negotiations between parties in another context. Some parties contend that it demonstrates a lack of good faith for a party to fail to appoint a representative in

[267] *See, e.g.*, ACSI comments at 7-11; AT&T comments at 86-88; Cox comments at 45-46; GST comments at 6-7; MFS comments at 10-14 (for example, incumbent LECs must provide detailed documentation to support claims that a request to unbundle an element is technically infeasible); TCC comments at 9 (incumbent LECs must provide cost studies that underlie proposed rates); Time Warner comments at 22.

[268] U S West comments at 40-42.

[269] *See, e.g.*, Cincinnati Bell comments at 8-9; GTE comments at 15-17; PacTel comments at 16-21; TDS comments at 5-6; Anchorage Tel. Utility reply at 6-7.

[270] LCI comments at 24; *accord* GCI reply at 3.

[271] ALTS comments at 12; AT&T comments at 86-88; BellSouth comments at 10-11; Time Warner comments at 22.

[272] Time Warner comments at 26.

negotiations that has authority to bind the party it represents,[273] or at least authority to enter into tentative agreements on behalf of such party,[274] and that such failure needlessly delays negotiations. SCBA asserts that delays caused by failing to appoint an appropriate representative are particularly burdensome on small cable operators, which lack the resources to endure protracted negotiations and arbitrations.[275]

2. Discussion

148. The Uniform Commercial Code defines "good faith" as "honesty in fact in the conduct of the transaction concerned."[276] When looking at good faith, the question "is a narrow one focused on the subjective intent with which the person in question has acted."[277] Even where there is no specific duty to negotiate in good faith, certain principles or standards of conduct have been held to apply.[278] For example, parties may not use duress or misrepresentation in negotiations.[279] Thus, the duty to negotiate in good faith, at a minimum, prevents parties from intentionally misleading or coercing parties into reaching an agreement they would not otherwise have made. We conclude that intentionally obstructing negotiations also would constitute a failure to negotiate in good faith, because it reflects a party's unwillingness to reach agreement.

149. Because section 252 permits parties to seek mediation "at any point in the negotiation,"[280] and also allows parties to seek arbitration as early as 135 days after an

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[273] AT&T comments at 86-88; CEDRA comments at 8.

[274] MFS comments at 10-14.

[275] SCBA comments at 10; *accord* Excel comments at 8-9; SBA comments at 8; Frontier reply at 6.

U.C.C. § 1-201(19) (1981); *see also* Black's Law Dictionary at 353 (Abridged ed. 1983) ("Good faith is an intangible and abstract quality with no technical meaning or statutory definition, and it encompasses, among other things, an honest belief, the absence of malice, and the absence of design to defraud or to seek an unconscionable advantage . . .").

[277] U.C.C. § 1-201 (84).

[278] Steven J. Burton and Eric G. Anderson, *Contractual Good Faith*, § 8.2.2 at 332 (1995).

[279] *Id.*, § 8.3.1 at 335-341.

[280] 47 U.S.C. § 252(a)(2).

incumbent LEC receives a request for negotiation under section 252,[281] we conclude that Congress specifically contemplated that one or more of the parties may fail to negotiate in good faith, and created at least one remedy in the arbitration process.[282] The possibility of arbitration itself will facilitate good faith negotiation. For example, parties seeking to avoid a legitimate accusation of breach of the duty of good faith in negotiation will work to provide their negotiating adversary all relevant information -- given that section 252(b)(4)(B) authorizes the state commission to require the parties "to provide such information as may be necessary for the State commission to reach a decision on the unresolved issues."[283] That provision also states that, if either party "fails unreasonably to respond on a timely basis to any reasonable request from the State commission, then the State commission may proceed on the basis of the best information available to it from whatever source derived."[284] The likelihood that an arbitrator will review the positions taken by the parties during negotiations also should discourage parties from refusing unreasonably to provide relevant information to each other or to delay negotiations.

150. We believe that determining whether a party has acted in good faith often will need to be decided on a case-by-case basis by state commissions or, in some instances the FCC, in light of all the facts and circumstances underlying the negotiations.[285] In light of these considerations, we set forth some minimum standards that will offer parties guidance in determining whether they are acting in good faith, but leave specific determinations of whether a party has acted in good faith to be decided by a state commission, court, or the FCC on a case-by-case basis.

151. We find that there may be pro-competitive reasons for parties to enter into nondisclosure agreements. A broad range of commenters, including IXCs, state commissions, and incumbent LECs, support this view. We conclude that there can be nondisclosure agreements that would not constitute a violation of the good faith negotiation duty, but we caution that overly broad, restrictive, or coercive nondisclosure requirements may well have

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[281] 47 U.S.C. § 252(b)(1).

[282] Section 252(b)(4)(C) requires state commissions to "conclude the resolution of any unresolved issues not later than 9 months after the date on which the local exchange carrier received the request under this section." 47 U.S.C. § 252(b)(4)(C).

[283] 47 U.S.C. § 252(b)(4)(B).

[284] *Id.*

[285] This is consistent with earlier Commission decisions. *See Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation*, WT Docket 95-157, First Report and Order, FCC 96-196, at para. 20 (rel. Apr. 30, 1996).

anticompetitive effects. We therefore will not prejudge whether a party has demonstrated a failure to negotiate in good faith by requesting another party to sign a nondisclosure agreement, or by failing to sign a nondisclosure agreement; such demands by incumbents, however, are of concern and any complaint alleging such tactics should be evaluated carefully. Agreements may not, however, preclude a party from providing information requested by the FCC, a state commission, or in support of a request for arbitration under section 252(b)(2)(B).

152. We reject the general contention that a request by a party that another party limit its legal remedies as part of a negotiated agreement will in all cases constitute a violation of the duty to negotiate in good faith. A party may voluntarily agree to limit its legal rights or remedies in order to obtain a valuable concession from another party. In some circumstances, however, a party may violate this statutory provision by demanding that another waive its legal rights. For example, we agree with ALTS' contention that an incumbent LEC may not demand that the requesting carrier attest that the agreement complies with all provisions of the 1996 Act, federal regulations, and state law,[286] because such a demand would be at odds with the provisions of sections 251 and 252 that are intended to foster opportunities for competition on a level playing field. In addition, we find that it is a *per se* failure to negotiate in good faith for a party to refuse to include in an agreement a provision that permits the agreement to be amended in the future to take into account changes in Commission or state rules. Refusing to permit a party to include such a provision would be tantamount to forcing a party to waive its legal rights in the future.

153. We decline to find that other practices identified by parties constitute *per se* violations of the duty to negotiate in good faith. Time Warner contends that we should find that a party is not negotiating in good faith under section 252 if it seeks to tie resolution of issues in that negotiation to the resolution of other, unrelated disputes between the parties in another proceeding. On its face, the hypothetical practice raises concerns. Time Warner, however, did not present specific examples of how linking two independent negotiation proceedings would undermine good faith negotiations. We believe that requesting carriers have certain rights under sections 251 and 252, and those rights may not be derogated by an incumbent LEC demanding *quid pro quo* concessions in another proceeding. Parties, however, could mutually agree to link section 252 negotiations to negotiations on a separate matter. In fact, to the extent that concurrent resolution of issues could offer more potential solutions or may equalize the bargaining power between the parties, such action may be pro-competitive.[287]

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[286] ALTS comments at Attachment A, 15.

[287] For example, an incumbent LEC that offers video programming may be negotiating for the right to use video programming owned by a cable company while the cable company is negotiating terms for interconnecting with the incumbent LEC. Addressing some or all of the issues in the two negotiations collectively could expand the options for reaching agreement, and would equalize the parties' bargaining power, because each has something that the other party desires.

154. We agree with parties contending that actions that are intended to delay negotiations or resolution of disputes are inconsistent with the statutory duty to negotiate in good faith.[288] The Commission will not condone any actions that are deliberately intended to delay competitive entry, in contravention of the statute's goals. We agree with SCBA that small entities seeking to enter the market may be particularly disadvantaged by delay. However, whether a party has failed to negotiate in good faith by employing unreasonable delaying tactics must be determined on a specific, case-by-case basis. For example, a party may not refuse to negotiate with a requesting telecommunications carrier, and a party may not condition negotiation on a carrier first obtaining state certification.[289] A determination based upon the intent of a party, however, is not susceptible to a standardized rule. If a party refuses throughout the negotiation process to designate a representative with authority to make binding representations on behalf of the party, and thereby significantly delays resolution of issues, such action would constitute failure to negotiate in good faith.[290] In particular, we believe that designating a representative authorized to make binding representations on behalf of a party will assist small entities and small incumbent LECs by centralizing communications and thereby facilitating the negotiation process.[291] On the other hand, it is unreasonable to expect an agent to have authority to bind the principal on every issue -- i.e., a person may reasonably be an agent of limited authority.

155. We agree with incumbent LECs and new entrants that contend that the parties should be required to provide information necessary to reach agreement.[292] Parties should provide information that will speed the provisioning process, and incumbent LECs must prove to the state commission, or in some instances the Commission or a court, that delay is not a

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[288] *See United States v. American Tel. and Tel. Co.*, 524 F. Supp. 1336, 1356 and n.84 (D.D.C. 1981); *see also National Labor Relations Board v. Katz*, 369 U.S. 736, 742 (1962); *Amendment of Rules and Policies Governing the Attachment of Cable Television Hardware to Utility Poles*, 4 FCC Rcd 468, 472 (1989).

[289] *See, e.g.*, ALTS comments at 12-13 (contending that U S West has refused to start negotiations until it formed its positions regarding section 251, and that SBC has attempted to interpret and "enforce" state certification requirements).

[290] The Commission has reached a consistent conclusion in other instances. *See, e.g., Application of Gross Telecasting, Inc.*, 92 FCC 2d 250, 442 (1981); *Public Notice*, FCC Asks for Comments Regarding the Establishment of and Advisory Committee to Negotiate Proposed Regulations, 7 FCC Rcd 2370, 2372 (1992).

[291] For purposes of our analysis pursuant to the Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*, our use of the terms "small entities" and "small businesses" does not encompass "small incumbent LECs." We use the term "small incumbent LECs" to refer to any incumbent LECs that arguably might be defined by the Small Business Administration as "small business concerns."

[292] *See National Labor Relations Board v. Truitt Mfg Co.*, 351 U.S. 149, 153 (1956) (the trier of fact can reasonably conclude that a party lacks good faith if it raises assertions about inability to pay without making the slightest effort to substantiate that claim); *see also Microwave Facilities Operating in 1850-1990 MHz (2GHz) Band*, 61 F.R. 29679, 29689 (1996).

motive in their conduct. Review of such requests, however, must be made on a case-by-case basis to determine whether the information requested is reasonable and necessary to resolving the issues at stake. It would be reasonable, for example, for a requesting carrier to seek and obtain cost data relevant to the negotiation, or information about the incumbent's network that is necessary to make a determination about which network elements to request to serve a particular customer.[293] It would not appear to be reasonable, however, for a carrier to demand proprietary information about the incumbent's network that is not necessary for such interconnection.[294] We conclude that an incumbent LEC may not deny a requesting carrier's reasonable request for cost data during the negotiation process, because we conclude that such information is necessary for the requesting carrier to determine whether the rates offered by the incumbent LEC are reasonable. We find that this is consistent with Congress's intention for parties to use the voluntary negotiation process, if possible, to reach agreements. On the other hand, the refusal of a new entrant to provide data about its own costs does not appear on its face to be unreasonable, because the negotiations are not about unbundling or leasing the new entrants' networks.

156. We also find that incumbent LECs may not require requesting carriers to satisfy a "bona fide request" process as part of their duty to negotiate in good faith. Some of the information that incumbent LECs propose to include in a bona fide request requirement may be legitimately demanded from the requesting carrier; some of the proposed requirements, on the other hand, exceed the scope of what is necessary for the parties to reach agreement, and imposing such requirements may discourage new entry. For example, parties advocate that a "bona fide request" requirement should require requesting carriers to commit to purchase services or facilities for a specified period of time. We believe that forcing carriers to make such a commitment before critical terms, such as price, have been resolved is likely to impede new entry. Moreover, we note that section 251(c) does not impose any bona fide request requirement. In contrast, section 251(f)(1) provides that a rural telephone company is exempt from the requirements of 251(c) until, among other things, it receives a "bona fide request" for interconnection, services, or network elements. This suggests that, if Congress had intended to impose a "bona fide request" requirement on requesting carriers as part of their duty to negotiate in good faith, Congress would have made that requirement explicit.

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[293] *See* discussion of technical feasibility, *infra*, Section IV. In addition, the Commission's federal advisory committee, the Network Reliability Council, has developed templates that summarize and list activities that need to occur when service providers connect their networks pursuant to defined interconnection specifications or when they are attempting to define a new network interface specification. As consensus recommendations from the Council, we presume the elements defined in the templates are "good faith" issues for negotiation. Comments of the Secretariat of the Second Network Reliability Council at 4-5 (*citing Network Reliability: The Path Forward*, (1996), Section 2, pp. 51-56).

[294] This is consistent with previous FCC determinations. *See, e.g., Amendment of Rules and Policies Governing the Attachment of Cable Television Hardware to Utility Poles*, 4 FCC Rcd 468, 472 (1989) (good faith negotiations necessitate that, at a minimum, one party must approach the other with a specific request).

D. Applicability of Section 252 to Preexisting Agreements

1. Background

157. Section 252(a)(1) provides that, "[u]pon receiving a request for interconnection, services, or network elements pursuant to section 251, an incumbent local exchange carrier may negotiate and enter into a binding agreement with the requesting telecommunications carrier or carriers without regard to the standards set forth in subsections (b) and (c) of section 251 . . . . The agreement, including any interconnection agreement negotiated before the date of enactment of the Telecommunications Act of 1996, shall be submitted to the State commission under subsection (e) of this section."[295]

158. In the NPRM, we sought comment on whether sections 252(a)(1) and 252(e) require parties that have negotiated agreements for interconnection, services or network elements prior to the passage of the 1996 Act to submit such agreements to state commissions for approval. We also asked whether one party to such an existing agreement could compel renegotiation and arbitration in accordance with the procedures set forth in section 252.

2. Comments

159. In general, potential local competitors that addressed this issue argue that the plain language of section 251(a)(1) requires such agreements to be filed with the appropriate state commission for review under section 252(e).[296] In addition, these parties assert that, pursuant to section 252(i), the terms of such agreements must be made available to other carriers.[297] These parties claim that filing such agreements also should be required as a matter of public policy, because they provide evidence of existing interconnection terms that may provide the baseline for other negotiations,[298] and ensure that incumbents are not favoring

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[295] 47 U.S.C. § 252(a)(1). Section 252(e) provides that "(a)ny interconnection agreement adopted by negotiation or arbitration shall be submitted for approval to the State commission." 47 U.S.C. § 252(e).

[296] *See, e.g.*, ALTS comments at 14-16; CompTel comments at 104; GST comments at 7; Jones Intercable comments at 22-23; Ohio Consumers' Counsel comments at 6; Sprint comments at 12; TCC comments at 9-10; *see also* Louisiana Commission comments at 8 (carriers must submit preexisting agreements upon request by the state commission).

[297] Section 252(i) provides that a LEC "shall make available any interconnection, service, or network element provided under an agreement approved under this section to which it is a party to any other requesting telecommunications carrier upon the same terms and conditions as those provided in the agreement." 47 U.S.C. § 252(i).

[298] AT&T comments at 88-90; Jones Intercable comments at 22-23.

some carriers over others.[299] Parties also claim that preexisting agreements will provide useful information to the states,[300] and that states should have the ability to review preexisting agreements to ensure that they comply with the 1996 Act.[301]

160. Incumbent LECs allege that the statute does not require that preexisting agreements be filed with state commissions. They contend that Congress only intended parties to file agreements negotiated pursuant to section 251.[302] These parties point out that section 252(a) specifically refers to requests for interconnection, services, or network elements "pursuant to section 251," and contend that an agreement reached prior to the enactment of the 1996 Act, by definition, could not have been negotiated pursuant to section 251.[303] Several parties suggest that the 1996 Act only requires filing of preexisting agreements that have been amended subsequent to the enactment of the 1996 Act, or that have been incorporated by reference into agreements negotiated pursuant to section 251.[304] Some commenters also contend that, as a policy matter, there is no reason to require filing of preexisting agreements. The California Commission asserts that requiring filing and review of preexisting agreements would be burdensome for states, and is unnecessary, because many states already reviewed such agreements prior to the passage of the 1996 Act.[305]

161. A related question is whether there should be a distinction between preexisting interconnection agreements between competitors within the same service area and agreements between non-competing or neighboring LECs. Several parties contend that the 1996 Act does not exempt such agreements from the filing requirement.[306] They also claim that it may be

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[299] ALTS comments at 14-16, reply at 39-41.

[300] *See, e.g.*, AT&T comments at 88-90.

[301] *See, e.g.*, Arch comments at 9-10; Time Warner comments at 25.

[302] *See, e.g.*, BellSouth comments at 10-11; Cincinnati Bell comments at 9-10; Home Tel. comments at 2; J. Staurulakis comments at 3; F. Williamson comments at 5.

[303] *See, e.g.*, Ameritech comments at 95-96; BellSouth comments at 10-11; NYNEX reply at 15-16 (section 251(i) also applies only to agreements approved under section 252).

[304] *See, e.g.*, Ameritech comments at 95-96; BellSouth comments at 10-11.

[305] California Commission comments at 33.

[306] *See, e.g.*, Colorado Commission comments at 50; MFS comments at 66; Michigan Commission Staff comments at 20; Ohio Consumers' Counsel comments at 34; Oregon Commission comments at 33; ALTS reply at 35; Cox reply at 38-39; WinStar reply at 18-19.

difficult to monitor whether parties are competing, and that, in light of the 1996 Act, parties that did not compete in the past may do so in the future.[307] ACTA asserts that such agreements will provide the best information available on technically, economically and operationally feasible interconnection arrangements, because these agreements were reached in a noncompetitive context, where the incumbent was not striving to protect its market from competition, and therefore, as a public policy matter, they should be publicly filed.[308] ALTS states that Wisconsin and other states have already addressed this issue and reached the same conclusion.[309]

162. Incumbent LECs argue that Congress did not contemplate that agreements between non-competing LECs would be used as models for agreements between competitors,[310] and that such agreements bear no relation to competitive interconnection agreements.[311] Some parties argue that requiring preexisting agreements between noncompeting LECs would jeopardize universal service in many areas, especially where extended area service arrangements are in place.[312] NYNEX and the Rural Telephone Coalition contend that agreements between neighboring LECs fall within the provisions of section 259, which give rural LECs that lack economies of scope or scale the right to obtain or continue "infrastructure sharing" with neighboring larger LECs.[313]

163. Several parties recommend that agreements reached before enactment of the 1996 Act should be subject to a period of renegotiation.[314] For example, Sprint contends that

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[307] *See, e.g.*, MFS comments at 67; Oregon Commission comments at 34; ALTS reply at 36; Cox reply at 39.

[308] ACTA comments at 6-8; *accord* Cox reply at 38; WinStar reply at 19.

[309] ALTS reply at 35-36. *See, e.g., Investigation of the Implementation of the Federal Telecommunications Act of 1996 in Wisconsin*, 05-TI-140 (Wisconsin Commission May 17, 1996); *In re Negotiated Interconnection Agreements of Telecommunications Carriers*, Docket No. 96-098-U (Arkansas Commission rel. Apr. 1, 1996).

[310] *See, e.g.*, NYNEX comments at 27 (*citing* Joint Explanatory Statement at 117, 120; Cong. Rec. S7893 (daily ed. June 7, 1995) (statement of Sen. Pressler)); Rural Tel. Coalition comments at 16; SBC comments at 53; USTA comments at 68-69.

[311] Cincinnati Bell comments at 9-10; MECA comments at 20-21; Texas Statewide Telephone Cooperative, Inc. reply at 8-9; U S West reply at 29-30.

[312] Home Tel. comments at 2; J. Staurulakis comments at 3; *see also* USTA comments at 69.

[313] NYNEX reply at 15; Rural Tel. Coalition reply at 12.

[314] Intermedia comments at 16; LCI comments at 24-26; Sprint comments at 12-13, reply at 13-14.

the passage of the 1996 Act constitutes a "changed circumstance" that would justify renegotiation of preexisting agreements.[315] Sprint proposes that parties should be required to file preexisting agreements with the state commission, but that parties should be given a six-month period to renegotiate before the terms of such agreements are made available to others under section 252(i). Intermedia Communications advocates that parties that signed long-term contracts with incumbent LECs before additional rights and competitive alternatives were available under the 1996 Act should be permitted to terminate those agreements, with minimal liability, for a period of six months after such competitive alternatives become available.[316] GST advocates that only non-incumbent LECs that are parties to an agreement should have the right to renegotiate contracts.[317] The Texas Commission states that parties should be permitted to renegotiate in the event that the state determines that the preexisting agreement violates section 252.[318]

164. Some parties contend that there is no basis for renegotiation of preexisting contracts.[319] The Illinois Commission maintains that parties have a legal obligation to abide by the terms of their contracts, and the 1996 Act does not affect that obligation.[320] It claims that a unilateral right to abrogate existing contracts could undo progress that has already been made to foster local competition. The Illinois Commerce Commission notes that parties may mutually agree to amend existing contracts, and that a party that already has an agreement with an incumbent may request a new agreement under section 252(i) if the interconnection, services, or access to unbundled elements it seeks are different from those encompassed in the existing agreement. Pacific Telesis asserts that requiring renegotiation and arbitration of existing agreements would waste resources and interfere with parties' settled expectations.[321]

[315] Sprint comments at 12 (pre-Act agreements were entered into under a different regulatory scheme, and without contemplation by the parties that the local market might become competitive; in addition, such contracts might be inconsistent with section 251, and states should not expend resources reviewing them); *accord* Time Warner comments at 26 (the Commission should establish "fresh look" period as it has done in other cases involving changed circumstances).

[316] Intermedia comments at 16; *accord* LCI comments at 24-26.

[317] GST comments at 7.

[318] Texas Commission comments at 7-8.

[319] *See, e.g.*, Illinois Commission comments at 23-24; Louisiana Commission comments at 8; F. Williamson comments at 5.

[320] Illinois Commission comments at 23-24.

[321] PacTel comments at 21.

3. Discussion

165. We conclude that the 1996 Act requires all interconnection agreements, "including any interconnection agreement negotiated before the date of enactment of the Telecommunications Act of 1996," to be submitted to the state commission for approval pursuant to section 252(e).[322] The 1996 Act does not exempt certain categories of agreements from this requirement. When Congress sought to exclude preexisting contracts from provisions of the new law, it did so expressly. For example, section 276(b)(3) provides that "nothing in this section shall affect any existing contracts between location providers and payphone service providers or interLATA or intraLATA carriers that are in force and effect as of the date of enactment of the Telecommunications Act of 1996."[323] Nothing in the legislative history leads us to a contrary conclusion. Congress intended, in enacting sections 251 and 252, to create opportunities for local telephone competition. We believe that this pro-competitive goal is best effected by subjecting all agreements to state commission review.

166. The first sentence in section 252(a)(1) refers to requests for interconnection "pursuant to section 251."[324] The final sentence in section 252(a)(1) requires submission to the state commission of all negotiated agreements, including those negotiated *before* the enactment of the 1996 Act. Some parties have asserted that there is a tension between those two sentences. We conclude that the final sentence of section 252(a)(1), which requires that *any* interconnection agreement must be submitted to the state commission, can and should be read to be independent of the prior sentences in section 252(a)(1). The interpretation suggested by some commenters that preexisting contracts need only be filed if they are amended subsequent to the 1996 Act, or incorporated by reference into agreements negotiated pursuant to the 1996 Act, would force us to impose conditions that were not intended by Congress.

167. As a matter of policy, moreover, we believe that requiring filing of all interconnection agreements best promotes Congress's stated goals of opening up local markets to competition, and permitting interconnection on just, reasonable, and nondiscriminatory terms. State commissions should have the opportunity to review *all* agreements, including those that were negotiated before the new law was enacted, to ensure that such agreements do not discriminate against third parties, and are not contrary to the public interest. In particular, preexisting agreements may include provisions that violate or are inconsistent with the pro-

[322] 47 U.S.C. § 252(a).

[323] 47 U.S.C. § 276(b)(3) (addressing nondiscrimination safeguards and regulations regarding payphone service).

[324] 47 U.S.C. § 252(a)(1).

competitive goals of the 1996 Act, and states may elect to reject such agreements under section 252(e)(2)(A). Requiring all contracts to be filed also limits an incumbent LEC's ability to discriminate among carriers, for at least two reasons. First, requiring public filing of agreements enables carriers to have information about rates, terms, and conditions that an incumbent LEC makes available to others. Second, any interconnection, service or network element provided under an agreement approved by the state commission under section 252 must be made available to any other requesting telecommunications carrier upon the same terms and conditions, in accordance with section 252(i).[325] In addition, we believe that having the opportunity to review existing agreements may provide state commissions and potential competitors with a starting point for determining what is "technically feasible" for interconnection.[326]

168. Conversely, excluding certain agreements from public disclosure could have anticompetitive consequences. For example, such contracts could include agreements not to compete. In addition, if we exempt agreements between neighboring non-competing LECs, those parties might have a disincentive to compete with each other in the future, in order to preserve the terms of their preexisting agreements. Such a result runs counter to the goal of the 1996 Act to encourage local service competition. Moreover, preserving such "non-competing" agreements could effectively insulate those parties from competition by new entrants. For example, if a new entrant seeking to provide competitive local service in a rural community is unable to obtain from a neighboring BOC interconnection or transport and termination on terms that are as favorable as those the BOC offers to the incumbent LEC in the rural area, the new entrant cannot effectively compete.[327] This is because the new entrant will have to charge its subscribers higher rates than the incumbent LEC charges to place calls to subscribers of the neighboring BOC.

[325] *See infra*, Section XV.B.

[326] *See, e.g.*, 47 U.S.C. §§ 251(c)(2)(B) and 251(c)(3).

[327] This analysis does not address the separate question of whether an incumbent LEC in a rural area must offer interconnection, resale services, or unbundled network elements. As discussed *infra*, Section XII, Congress provided rural carriers with an exemption from section 251(c) requirements until the state commission removes such exemption. 47 U.S.C. § 251(f)(1).

169. We find that section 259 does not compel us to reach a different conclusion regarding the application of section 252 to agreements between neighboring LECs.[328] Section 259 is limited to agreements for infrastructure sharing between incumbent LECs and telecommunications carriers that lack "economies of scale or scope," as determined in accordance with regulations prescribed by the Commission.[329] We conclude that the purpose and scope of section 259 differ significantly from the purpose and scope of section 251.[330] Section 259 is a limited and discrete provision designed to bring the benefits of advanced infrastructure to additional subscribers, in the context of the pro-competitive goals and provisions of the 1996 Act. Moreover, section 259(b)(7) requires LECs to file with the Commission or the state "any tariffs, contracts or other arrangements showing the rates, terms, and conditions under which such carrier is making available public switched network infrastructure and functions under this section."[331] We believe that this language further supports our conclusion that Congress intended agreements between neighboring LECs to be filed and available for public inspection. Commenters also have failed to persuade us that universal service is jeopardized by our finding that agreements between neighboring LECs are subject to section 252 filing and review provisions. Concerns regarding universal service should be addressed by the Federal-State Joint Board, empaneled pursuant to section 254 of the 1996 Act.[332] The Joint Board has initiated a comprehensive review of universal service issues and is considering, among other matters, access to telecommunications and information services in rural and high cost areas.[333] In addition, as discussed in Section XII, *infra*, the 1996 Act provides for exemptions, suspension, or modification of some of the requirements in section 251 for rural or smaller carriers.

[328] Section 259 requires the Commission to prescribe, within one year after the date of enactment of the 1996 Act, regulations that require incumbent LECs "to make available to any qualifying carrier such public switched network infrastructure, technology, information, and telecommunications facilities and functions as may be requested by such qualifying carrier to provide telecommunications services, or to provide access to information services . . . " 47 U.S.C. § 259(a). A "qualifying carrier" is a telecommunications carrier that "lacks economies of scale or scope," and that offers telephone exchange service, exchange access, and any other service included in universal service to all consumers in the service area without preference. 47 U.S.C. § 259(d).

[329] 47 U.S.C. § 259(d)(1).

[330] The Commission plans to initiate a proceeding to establish regulations pursuant to section 259.

[331] 47 U.S.C. § 259(b)(7).

[332] *Universal Service NPRM, supra.*

[333] *See*, 47 U.S.C. § 251(f).

170. Some parties have suggested that we provide parties an opportunity to renegotiate preexisting contracts. Parties, of course, may mutually agree to renegotiate agreements, but we decline to mandate that parties renegotiate existing contracts. In addition, as discussed below, commercial mobile radio service (CMRS) providers that are party to preexisting agreements with incumbent LECs that provide for non-mutual compensation have the option of renegotiating such agreements with no termination liabilities or contract penalties.[334] We believe that generally requiring renegotiation of preexisting contracts is unnecessary, however, because state commissions will review preexisting agreements, and may reject any negotiated agreement that "discriminates against a telecommunications carrier not a party to the agreement," or that "is not consistent with the public interest, convenience, and necessity."[335] We recognize that preexisting agreements were negotiated under very different circumstances, and may not provide a reasonable basis for interconnection agreements under the 1996 Act. For example, non-competing neighboring LECs may have negotiated terms that simply are not viable in a competitive market. It would not foster efficient long-term competition to force parties to make available to all requesting carriers interconnection on terms not sustainable in a competitive environment. In such circumstances, a state commission would have authority to reject a preexisting agreement as inconsistent with the public interest. If a state commission approves a preexisting agreement, that agreement will be available to other parties in accordance with section 252(i). Contrary to NYNEX's assertion, once a state approves an agreement under section 252(e), that agreement is "approved under" section 252.

171. We decline to require immediate filing of pre-existing agreements. States should establish procedures and reasonable time frames for requiring filing of preexisting agreements in a timely manner. We leave these procedures largely in the hands of the states in order to ensure that we do not impair some states' ability to carry out their other duties under the 1996 Act, especially if a large number of such agreements must be filed and approved by the state commission. We believe, nevertheless, that we should set an outer time period to file with the appropriate state commission agreements that Class A carriers have with other Class A carriers that pre-date the 1996 Act.[336] We conclude that setting such a time limit will ensure that third parties are not prevented indefinitely from reviewing and taking advantage of the terms of preexisting agreements. We are concerned, however, about the burden that a national filing deadline might impose on small telephone companies that have preexisting

[334] *See infra*, Section XI.A.

[335] 47 U.S.C. § 252(e)(2)(A).

[336] Class A companies are defined as companies "having annual revenues from regulated telecommunications operations of $100,000,000 or more." 47 C.F.R. § 32.11(a)(1).

agreements with Class A carriers or with other small carriers.[337] We therefore limit the filing deadline requirement to preexisting agreements between Class A carriers. We encourage all carriers to file preexisting contracts with the appropriate state commission no later than June 30, 1997, but impose this as a *requirement* only with respect to agreements between Class A carriers. We find that requiring preexisting agreements between Class A carriers to be filed no later than June 30, 1997 is unlikely to burden state commissions unduly, and will give parties a reasonable opportunity to renegotiate agreements if they so choose, while at the same time, establishing this outer time limit ensures that third parties will have access to the terms of such agreements, under section 252(i), within a reasonable period. We expect to have completed proceedings on universal service and access charges by this filing deadline. States may impose a shorter time period for filing preexisting agreements.

[337] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

IV. INTERCONNECTION

172. This section of the Report and Order, and the three sections that follow it, address the interconnection and unbundling obligations that the Act imposes on incumbent LECs. Beyond the resale of incumbent LEC services, it is these obligations that pave the way for the introduction of facilities-based competition with incumbent LECs. The interconnection obligation of section 251(c)(2), discussed in this section, allows competing carriers to choose the most efficient points at which to exchange traffic with incumbent LECs, thereby lowering the competing carriers' costs of, among other things, transport and termination of traffic. The unbundling obligation of section 251(c)(3) further permits new entrants, where economically efficient, to substitute incumbent LEC facilities for some or all of the facilities the new entrant would have had to obtain in order to compete. Finally, both the interconnection and unbundling sections of the Act, in combination with the collocation obligation imposed on incumbents by section 251(c)(6), allow competing carriers to choose technically feasible methods of achieving interconnection or access to unbundled elements.

173. Section 251(c)(2) imposes upon incumbent LECs "the duty to provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the local exchange carrier's network . . . for the transmission and routing of telephone exchange service and exchange access."[338] Such interconnection must be: (1) provided by the incumbent LEC at "any technically feasible point within [its] network;"[339] (2) "at least equal in quality to that provided by the local exchange carrier to itself or . . . [to] any other party to which the carrier provides interconnection;"[340] and (3) provided on rates, terms, and conditions that are "just, reasonable, and nondiscriminatory, in accordance with the terms and conditions of the agreement and the requirements of this section and section 252."[341]

A. Relationship Between Interconnection and Transport and Termination

1. Background

174. In the NPRM, we sought comment on the relationship between the obligation of incumbent LECs to provide "interconnection" under section 251(c)(2) and the obligation of all LECs to establish reciprocal compensation arrangements for the "transport and termination" of

[338] 47 U.S.C. § 251(c)(2)(A).

[339] 47 U.S.C. § 251(c)(2)(B).

[340] 47 U.S.C. § 251(c)(2)(C).

[341] 47 U.S.C. § 251(c)(2)(D).

telecommunications pursuant to section 251(b)(5). We stated that the term "interconnection" might refer only to the physical linking of two networks or to both the linking of facilities and the transport and termination of traffic. We noted in the NPRM that section 252(d) sets forth different pricing standards for interconnection and transport and termination.

2. Comments

175. The BOCs, several state commissions, and other parties argue that a plain reading of section 251(c)(2) requires a determination that interconnection refers only to the physical linking of facilities.[342] In contrast, the IXCs and several other parties claim that interconnection includes both the physical connection of the facilities and the transmission and termination of traffic across that link.[343] CompTel contends that it would make no sense for Congress to require an incumbent LEC to engage in a physical linking with another network without requiring the incumbent LEC to route and terminate traffic from the other network.[344] Several parties claim that there is no inherent contradiction between the pricing standard in section 252(d)(1) for interconnection[345] and section 252(d)(2) for transport and termination[346] because, to the extent that section 252(d)(2) allows for the mutual and reciprocal recovery of each carrier's costs, the recovery could be interpreted to mean total service long run

[342] *See, e.g.*, Bell Atlantic comments at 20-21; BellSouth comments at 15; USTA comments at 9-10 (no useful purpose served by introducing ambiguity into the pricing standards that apply to the separate provisions); U S West comments at 11-12; GTE comments at 17-18 (interconnection denotes links between an incumbent LEC's network and a competitor's network while transport and termination refers to the transmission of a call from the point of interconnection to the called party); Florida Commission comments at 13; Illinois Commission comments at 29; New York Commission comments at 31; MFS comments at 15; Sprint comments at 13.

[343] *See, e.g.*, CompTel comments at 66-67; LDDS comments at 76; Texas Commission comments at 10; ACSI comments at 11.

[344] CompTel comments at 66-67.

[345] Section 252(d)(1) states that determinations by a state commission of the just and reasonable rate for interconnection pursuant to section 251(c)(2) and network elements pursuant to section 251(c)(3) shall be: (1) based on the cost determined without reference to a rate-of-return proceeding; (2) nondiscriminatory; and (3) may include a reasonable profit. 47 U.S.C. § 252(d)(1).

[346] Section 252(d)(2) states that, in connection with an incumbent LEC's compliance with section 251(b)(5), a state commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless: (1) the terms and conditions provide for mutual and reciprocal recovery of costs associated with the transport and termination of calls that originate on the network of another carrier; and, (2) such terms and conditions are a reasonable approximation of the additional costs of terminating such calls. Section 252(d)(2) explicitly states that bill-and-keep arrangements are not precluded under section 252(d)(2) and neither the Commission nor the states are authorized to establish rate regulation proceedings to establish the additional costs of transporting or terminating calls, or to require carriers to maintain records with respect to the additional costs of such calls. 47 U.S.C. § 252(d)(2).

incremental cost (TSLRIC) (including a reasonable profit) plus a reasonable contribution to joint and common costs, which is consistent with section 252(d)(1).[347]

3. Discussion

176. We conclude that the term "interconnection" under section 251(c)(2) refers only to the physical linking of two networks for the mutual exchange of traffic. Including the transport and termination of traffic within the meaning of section 251(c)(2) would result in reading out of the statute the duty of all LECs to establish "reciprocal compensation arrangements for the transport and termination of telecommunications," under section 251(b)(5).[348] In addition, in setting the pricing standard for section 251(c)(2) interconnection, section 252(d)(1) states it applies when state commissions make determinations "of the just and reasonable rate for interconnection of *facilities and equipment* for purposes of subsection (c)(2) of section 251."[349] Because section 251(d)(1) states that it only applies to the interconnection of "facilities and equipment," if we were to interpret section 251(c)(2) to refer to transport and termination of traffic as well as the physical linking of equipment and facilities, it would still be necessary to find a pricing standard for the transport and termination of traffic apart from section 252(d)(1). We also reject CompTel's argument that reading section 251(c)(2) to refer only to the physical linking of networks implies that incumbent LECs would not have a duty to route and terminate traffic. That duty applies to all LECs and is clearly expressed in section 251(b)(5). We note that because interconnection refers to the physical linking of two networks, and not the transport and termination of traffic, access charges are not affected by our rules implementing section 251(c)(2).

B. National Interconnection Rules

1. Background

177. In the NPRM, we tentatively concluded that national interconnection rules would facilitate swift entry by competitors in multiple states by eliminating the need to comply with a multiplicity of state variations in technical and procedural requirements.[350] We sought comment on this tentative conclusion.

[347] ACSI comments at 11; Texas Public Utility Counsel comments at 1, 50; Texas Commission comments at 10.

[348] 47 U.S.C. § 251(b)(5).

[349] 47 U.S.C. § 251(d)(1) (emphasis added).

[350] NPRM at paras. 50-51.

2. Comments

178. Parties raise many of the same arguments discussed above, in section II.A., regarding the advantages and disadvantages of explicit national rules for interconnection. IXCs, CAPs, cable operators, and others claim that national rules could prevent incumbent LECs from erecting artificial barriers to entry,[351] facilitate comprehensive business and network planning,[352] equalize bargaining power,[353] and expedite and simplify negotiations.[354] Other parties, including several BOCs and state commissions, argue that national rules should only be established for core requirements and should allow for state variations.[355] Some parties contend, for example, that the pace of technological change makes it impossible to create immutable and uniform interconnection rules.[356] SBC and PacTel claim that industry standards already exist for interconnection and that national standards would preclude the deployment of new technologies.[357] PacTel also claims that Commission rules requiring untested interconnection methodologies may slow competitive entry.[358]

3. Discussion

179. As discussed more fully above, we conclude that national rules regarding interconnection pursuant to section 251(c)(2) are necessary to further Congress's goal of creating conditions that will facilitate the development of competition in the telephone

[351] *See* MFS comments at 14; Teleport comments at 22; CompTel comments at 21; Ad Hoc Telecommunications Users Committee comments at 5; ACTA comments at 10; ACSI comments at 10; MCI reply at 24.

[352] *See* ACTA comments at 10; Vanguard comments at 10; Omnipoint comments at 17-18; NTIA reply at 3.

[353] *See* Teleport comments at 17; Kansas Commission comments at 5; AT&T reply at 9; MCI reply at 24; Time Warner reply at 6-7.

[354] *See* Intermedia comments at 3; Teleport reply at 8.

[355] *See, e.g.*, Ameritech comments at 11; BellSouth comments at 13-14; Bell Atlantic reply at 6-7; GTE reply at 9; Lincoln Tel. comments at 3; California Commission comments at 16; Illinois Commission comments at 25; New York Commission comments at 33; Texas Commission comments at 8; TCA comments at 4; Texas Tel. Ass'n comments at 1; F. Williamson comments at 7.

[356] *See* Ad Hoc Telecommunications Users Committee comments at 2; Citizens Utilities comments at 6-7; Rural Tel. Coalition comments at 31; Pennsylvania Commission reply at 23.

[357] SBC comments at 33; PacTel comments at 24, 28.

[358] PacTel comments at 23-24.

exchange market.[359] Uniform rules will permit all carriers, including small entities and small incumbent LECs, to plan regional or national networks using the same interconnection points in similar networks nationwide. Uniform rules will also guarantee consistent, minimum nondiscrimination safeguards and "equal in quality" standards in every state. Such rules will also avoid relitigating, in multiple states, the issue of whether interconnection at a particular point is technically feasible.

180. We believe, however, that inflexible or overly detailed national rules implementing section 251(c)(2) may inhibit the ability of the states or the parties to reach arrangements that reflect technological and market advances and regional differences. We also believe that, on several issues, the record is not adequate at this time to justify the establishment of national rules. Therefore, as required by section 251(d)(3) and as discussed in section II.C. above, our rules will permit states to go beyond the national rules discussed below, and impose additional procompetitive interconnection requirements, as long as such requirements are otherwise consistent with the 1996 Act and the Commission's regulations. We believe that we can benefit from state experience in our ongoing review of these issues.

C. Interconnection for the Transmission and Routing of Telephone Exchange Service and Exchange Access

1. Background

181. Section 251(c)(2) imposes a duty upon incumbent LECs to provide "interconnection with the [LEC's] network . . . for the transmission and routing of telephone exchange service and exchange access."[360] In the NPRM, we sought comment on whether a carrier could request interconnection pursuant to subsection (c)(2) for purposes of transmitting and routing telephone exchange service, exchange access, or both, or whether this provision requires that such a request be solely for purposes of providing *both* telephone exchange service and exchange access.[361]

2. Comments

182. The BOCs and several other parties state that a telecommunications carrier should not be able to request cost-based interconnection under section 251(c)(2) solely for the purpose of offering access services. They argue that a carrier requesting interconnection

[359] *See supra*, Section II.A.

[360] 47 U.S.C. § 251(c)(2).

[361] NPRM at para. 162.

solely under section 251(c)(2) must use that interconnection for the transmission and routing of both telephone exchange service *and* exchange access.[362] USTA concurs, and suggests that competitive access providers (CAPs) will not be harmed because, if CAPs wish to provide only exchange access, they are fully protected by the Commission's *Expanded Interconnection* rules.[363]

183. IXCs and the DOJ argue that carriers should be able to request cost-based interconnection under section 251(c)(2) solely for the purpose of offering access services. The IXCs claim that, in view of congressional intent not to limit entry into the local telecommunications market, the statute should be read to permit telecommunications carriers to provide either local exchange service, exchange access, or both.[364] DOJ and CompTel contend that permitting the use of section 251(c)(2) interconnection to provide competitive exchange access is not inconsistent with section 251(g)[365] because section 251(g) only preserves the rights of IXCs to equal access under the Commission's preexisting rules until such time that the Commission adopts new requirements. They argue that section 251(g) was not intended to limit the provision of exchange access by new entrants.[366] AT&T argues that, by requiring incumbent LECs to provide interconnection for the transmission and routing of telephone exchange access, Congress used the word "and" to make clear that incumbent LECs must make interconnection available for purposes of allowing new entrants to provide local exchange *and* exchange access, and thereby prevent incumbent LECs from claiming that, as long as they offered interconnection for at least one of these two purposes, they had met the requirement in section 251(c)(2).[367]

[362] *See, e.g.*, USTA comments at 62-64 (requiring both is in keeping with the Act's purpose of encouraging facilities-based competition); Ameritech comments at 17-19 (nothing in the Act or the legislative history indicates that Congress was concerned about exchange access service per se); Bell Atlantic comments at 8; BellSouth comments at 61; GTE comments at 75; Ohio Consumers' Counsel comments at 32.

[363] USTA comments at 65.

[364] *See, e.g.*, CompTel reply at 26, 33; AT&T reply at 24 n.40; Sprint comments at 68 n.38; DoJ comments at 44, 52; PageNet comments at 15-16 (the word "and" in the context of legislative history can be read alternatively as "and" or "or", depending on congressional intent).

[365] Section 251(g) states that each LEC "shall provide exchange access, information access, and exchange services for such access to [IXCs] and information service providers in accordance with the same equal access and nondiscriminatory interconnection restrictions and obligations (including receipt of compensation)" that apply prior to enactment of the 1996 Act. Section 251(g) also states that these rules shall remain in effect until the Commission "explicitly supersede[s]" them. 47 U.S.C. § 251(g).

[366] DoJ comments at 53 n.26; CompTel reply at 28.

[367] AT&T reply at 24 n.40.

3. Discussion

184. We conclude that the phrase "telephone exchange service and exchange access" imposes at least three obligations on incumbent LECs: an incumbent must provide interconnection for purposes of transmitting and routing telephone exchange traffic or exchange access traffic or both. We believe that this interpretation is consistent with both the language of the statute and Congress's intent to foster entry by competitive providers into the local exchange market.[368] Moreover, the term "local exchange carrier" is defined in the Act as "any person that is engaged in the provision of telephone exchange service *or* exchange access."[369] Thus, we believe that Congress intended to facilitate entry by carriers offering either service. In imposing an interconnection requirement under section 251(c)(2) to facilitate such entry, however, we believe that Congress did not want to deter entry by entities that seek to offer either service, or both, and, as a result, section 251(c)(2) requires incumbent LECs to interconnect with carriers providing "telephone exchange service *and* exchange access."[370] Congress made clear that incumbent LECs must provide interconnection to carriers that seek to offer telephone exchange service *and* to carriers that seek to offer exchange access. This interpretation is consistent with section 251(c)(2), which imposes an obligation on incumbent LECs, but not requesting carriers.[371] Thus, for example, an analogous requirement might be that incumbent LECs must provide interconnection for the transmission and routing of "electrical and optical signals." Such a hypothetical requirement could not rationally be read to obligate *requesting carriers* to provide both electrical and optical signals.[372]

185. We also conclude that requiring new entrants to make available both local exchange service and exchange access as a prerequisite to obtaining interconnection to the

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[368] As the U.S. Court of Appeals for the Fifth Circuit stated in *Peacock v. Lubbock Compress Company*, "the word 'and' is not a word with a single meaning, for chameleonlike, it takes its color from its surroundings." The court held that "[i]n the construction of statutes, it is the duty of the Court to ascertain the clear intention of the legislature. In order to do this. Courts are often compelled to construe 'or' as meaning 'and,' and again 'and' as meaning 'or'." *Peacock v. Lubbock Compress Company*, 252 F.2d 892, 893 (5th Cir. 1958) (*citing United States v. Fisk*, 70 U.S. 445, 448).

[369] 47 U.S.C. § 153(26) (emphasis added).

[370] 47 U.S.C. § 251(c)(2) (emphasis added).

[371] Where Congress intended to impose obligations on requesting carriers in section 251(c), it did so expressly. For example, section 251(c)(1) includes a specific and separate requirement on requesting carriers to negotiate in good faith. 47 U.S.C. § 251(c)(1).

[372] One definition of the word "and" is "as well as." Random House College Dictionary 50 (rev. ed. 1984). Under this definition, the provision can be read, and we believe should be read, to require LECs to provide interconnection for the transmission and routing of telephone exchange service as well as exchange access.

incumbent LEC's network under subsection (c)(2) would unduly restrict potential competitors. For example, CAPs often enter the telecommunications market as exchange access providers prior to offering telephone exchange services. Further, applying separate regulatory regimes (*i.e.*, section 251 related-rules for providers of telephone exchange and exchange access services and section 201 related-rules for providers of only exchange access services) with divergent requirements to parties using essentially the same equipment to transmit and route traffic, is undesirable in light of the new procompetitive paradigm created by section 251.[373] We see no convincing justification for treating providers of exchange access services that offer telephone exchange services differently from access providers who do not offer telephone exchange services. We therefore conclude that parties offering only exchange access are permitted to seek interconnection pursuant to section 251(c)(2).

D. Interexchange Service is Not Telephone Exchange Service or Exchange Access

1. Background

186. Sections 251(c)(2) and 251(c)(3) impose duties upon incumbent LECs to provide interconnection and nondiscriminatory access to unbundled network elements to "any requesting telecommunications carrier."[374] In the NPRM, we tentatively concluded that carriers providing interexchange services are "telecommunications carriers" and thus may seek interconnection and unbundled elements under subsections (c)(2) and (c)(3). We also tentatively concluded, however, that with respect to section 251(c)(2), the statute imposes limits on the purposes for which any telecommunications carrier, including IXCs, may request interconnection pursuant to that section. Section 251(c)(2) imposes an obligation upon incumbent LECs to provide requesting carriers with interconnection if the purpose of the interconnection is for the "transmission and routing of telephone exchange service and exchange access."[375] We tentatively concluded in the NPRM that interexchange service does not appear to constitute either "telephone exchange service" or "exchange access." "Exchange access" is defined in section 3(16) as "the offering of access to telephone exchange services or facilities for the purpose of the origination or termination of telephone toll services."[376] We stated that an IXC that requests interconnection to originate or terminate an interexchange toll call is not "offering" access services, but rather is "receiving" access services.

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[373] *See infra*, Section VI.B.2.a. for a discussion of the relationship between *Expanded Interconnection* tariffs and section 251. Competitive access providers use the same equipment in essentially the same manner as other providers of both telephone exchange and exchange access services.

[374] 47 U.S.C. §§ 251(c)(2) and (c)(3).

[375] 47 U.S.C. § 251(c)(2)(A).

[376] 47 U.S.C. § 153(16).

2. Comments

187. DOJ and the Illinois Commission agree with the Commission's tentative conclusion that IXCs may obtain interconnection pursuant to 251(c)(2) to provide exchange service and exchange access.[377] DOJ states that this would permit IXCs to participate fully in the provision of local exchange and exchange access services.[378]

188. Many parties, including several incumbent LECs and DOJ, agree with the Commission's tentative conclusion in the NPRM that carriers are not permitted to receive interconnection pursuant to 251(c)(2) solely for the purpose of originating or terminating interexchange traffic.[379] Several parties contend that, although IXCs are telecommunications carriers under the 1996 Act, they provide neither "exchange service" nor "exchange access" when they offer only long distance service to their customers.[380] Some commenters assert that an IXC requesting interconnection to originate or terminate a toll call would be receiving access services, not offering them, and thus would not fall within the definition of exchange access.[381] Parties also claim that permitting interconnection for this purpose would conflict with the plain meaning of sections 251(i)[382] and (g).[383] USTA argues that section 251(g)

[377] DoJ comments at 42-43; Illinois Commission comments at 48-49.

[378] DoJ comments at 42-43.

[379] *See, e.g.*, BellSouth comments at 60-61; NYNEX comments at 5; GTE comments at 75; DoJ comments at 42; California Commission comments at 34; Bell Atlantic reply at 4-5; PacTel reply at 36; Rural Tel. Coalition reply at 8; NYNEX reply at 7 (it is not a question of the type of party that is applying for interconnection but rather the purpose for which the interconnection is being sought).

[380] DoJ comments at 42; USTA reply at 5; BellSouth reply at 45. NYNEX argues that, although some parties contend that section 251(c)(2)(A) refers to the services that the incumbent LEC provides rather than the services the requesting carrier seeks, this is contrary to the most natural reading of the language of the statute and is inconsistent with the legislative history, which makes clear that the section was intended to apply to interconnection between LECs. NYNEX reply at 7-8.

[381] *See, e.g.*, DoJ comments at 42; USTA reply at 5; BellSouth reply at 45; PacTel reply at 36; Sprint reply at 33; Rural Tel. Coalition reply at 8.

[382] *See, e.g.*, USTA comments at 61; Bell Atlantic comments at 9; NYNEX comments at 12-13; NYNEX reply at 9-10; Rural Tel. Coalition reply at 9.

requires LECs to continue to provide exchange access service to IXCs under the Commission's existing rules. USTA claims that if Congress had intended to change the access charge regime within the timeframe for implementing section 251, it would not have granted the Joint Board, created under section 254, nine months to make recommendations to the Commission.[384] Several parties also argue that the legislative history supports the conclusion that section 251 was not designed to permit IXCs to avoid application of our current access charge rules.[385] Other carriers claim that permitting interconnection pursuant to section 251(c)(2) to allow parties to avoid access charges would be unwise from a policy perspective, because it would divest the Commission of jurisdiction over the rates for interstate exchange access services,[386] and would preempt state pricing regulations that were the result of years of consideration.[387]

189. IXCs and others argue that section 251(c)(2) permits carriers to obtain interconnection solely for the purpose of originating and terminating interexchange traffic.[388] CompTel claims that IXCs satisfy the "offering" requirement when they offer and provide

[383] *See, e.g.*, USTA comments at 61; NYNEX comments at 13; Bell Atlantic comments at 9; GTE comments at 75; Citizens Utilities comments at 22; Rural Tel. Coalition reply at 10. GTE argues that if, as some parties claim, section 251(g) preserves the Commission's access charge regime only until the Commission adopts new rules under section 251(d), this renders section 251(g) unnecessary because the need to preserve those rules does not arise until the new section 251(d) rules are implemented. GTE reply at 39. Also, GTE claims that interpreting section 251(g) as maintaining only the existing equal access and nondiscrimination requirements of the MFJ, GTE Decree, and the Commission's rules overlooks the fact that section 251(g) explicitly preserves rules regarding "receipt of compensation" for such access. *Id.*

[384] USTA comments at 61.

[385] *See, e.g.*, NECA comments at 4-5; PacTel reply at 36; Rural Tel. Coalition reply at 9-10 (the Joint Explanatory Statement (p. 123) evinces Congress's intent to preserve the Commission's access charge regime and authority over interstate access).

[386] Ameritech comments at 21; Bell Atlantic comments at 10; NYNEX comments at 78; PacTel reply at 36; Rural Tel. Coalition reply at 8.

[387] NYNEX comments at 19; NECA comments at 2-4.

[388] *See, e.g.*, AT&T reply at 23; MCI reply at 20-22; CompTel reply at 25-26; American Petroleum Institute comments at 3-13; ALTS comments at 46; Cable & Wireless comments at 28; Citizens Utilities comments at 21; Excel comments at 3 (use restrictions will hinder competition).

exchange access as an integral part of long distance service to the end-user subscribers.[389] Cable and Wireless claims that section 251(i) merely preserves the Commission's authority under section 201(a), which requires carriers to establish physical connection with each other in compliance with the Commission's rules.[390] ALTS argues that any erosion of access revenues that might occur as a result of the IXCs' migration to section 251 interconnection arrangements would not occur so rapidly as to affect incumbent LECs materially before the Commission completes its reform of the universal service subsidy flows.[391] CompTel suggests an interim plan that would permit incumbent LECs to charge non-cost-based rates for access until the Commission completes access charge reform, but would declare that until that time, incumbent LECs would be deemed not to have met the section 271 checklist for providing in-region interexchange service.[392] Excel claims that it would be unlawful under section 202(a) for an IXC to pay charges for local network connections that are substantially higher than the charges paid by other users of the same network services.[393] Finally, CompTel and MCI argue that the legislative history of section 251 supports the conclusion that IXCs are permitted to obtain interconnection pursuant to section 251.[394]

3. Discussion

[389] CompTel comments at 51-52. CompTel claims that by writing a broader "offering" requirement into the statute, the FCC would limit interconnection under section 251(c)(2) to LECs, and not "telecommunications carriers" as Congress intended. CompTel also claims that there is no feasible interpretation that would prevent IXCs, regardless of whether they "offer" exchange access, from obtaining stand-alone exchange access indirectly through co-carrier interconnection arrangements under section 251(c)(2). CompTel reply at 31-32. Cable & Wireless claims that the canons of statutory construction preclude a reading of the Act that holds that Congress provided all telecommunications providers with the ability to purchase access to unbundled elements for telecommunications services, but forbade them from interconnecting to the network in order to utilize unbundled elements for all telecommunications services. Cable & Wireless comments at 29.

[390] Cable & Wireless comments at 31.

[391] ALTS comments at 46; Citizens Utilities comments at 21; MCI reply at 21 (the loss of access charge revenues for incumbent LECs due to the Act cannot be used to deny the full benefits of section 251 to IXCs).

[392] CompTel comments at 81-87.

[393] Excel comments at 4-5.

[394] CompTel reply at 32 (although the Senate bill, S.652, expressly required requesting carriers to obtain interconnection for the purpose of providing exchange access service, Congress rewrote that provision in conference to remove the requirement that carriers obtain interconnection for the purpose of providing exchange access); MCI reply at 21 (arguments based on provisions in unenacted drafts of the Act excluding access from the local interconnection provisions are rebutted by the fact that both the House and Senate bills included provisions mandating cost-based access rates in other sections).

190. We conclude that IXCs are telecommunications carriers[395] under the 1996 Act, because they provide telecommunications services[396] (*i.e.*, "offer telecommunications for a fee directly to the public") by originating or terminating interexchange traffic. IXCs are permitted under the statute to obtain interconnection pursuant to section 251(c)(2) for the "transmission and routing of telephone exchange service and exchange access."[397] Moreover, traditional IXCs are a significant potential new local competitor and we conclude that denying them the right to obtain section 251(c)(2) interconnection lacks any legal or policy justification. Thus, all carriers (including those traditionally classified as IXCs) may obtain interconnection pursuant to section 251(c)(2) for the purpose of terminating calls originating from their customers residing in the same telephone exchange (*i.e.*, non-interexchange calls).

191. We conclude, however, that an IXC that requests interconnection solely for the purpose of originating or terminating its *interexchange* traffic, not for the provision of telephone exchange service and exchange access to others, on an incumbent LEC's network is not entitled to receive interconnection pursuant to section 251(c)(2).[398] Section 251(c)(2) states that incumbent LECs have a duty to interconnect with telecommunications providers "for the transmission and routing of telephone exchange service and exchange access."[399] A telecommunications carrier seeking interconnection only for interexchange services is not within the scope of this statutory language because it is not seeking interconnection for the purpose of providing telephone exchange service. Nor does a carrier seeking interconnection of interstate traffic only -- for the purpose of providing interstate services only -- fall within the scope of the phrase "exchange access." Such a would-be interconnector is not "offering" access to telephone exchange services. As we stated in the NPRM, an IXC that seeks to interconnect solely for the purpose of originating or terminating its own interexchange traffic

[395] 47 U.S.C. § 153(44).

[396] 47 U.S.C. § 153(46).

[397] 47 U.S.C. § 251(c)(2).

[398] As stated above, interconnection pursuant to section 251(c)(2) is merely the physical linking of facilities between two networks, and thus access charges are not implicated by the Commission's decisions regarding whether parties who seek to interconnect solely for the purpose of originating or terminating interexchange traffic on the incumbent's network are entitled to obtain interconnection pursuant to section 251(c)(2). *See supra*, Section IV.A.

[399] Section 153(47) defines telephone exchange service as "(A) service within a telephone exchange, or within a connected system of [ ] exchanges within the same exchange area operated to furnish . . . intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge, or (B) comparable service provided through a system of switches, transmission equipment, or other facilities . . . ." 47 U.S.C. § 153(47). Section 153(16) states that exchange access means "the offering of access to telephone exchange services or facilities for the purpose of the origination or termination of telephone toll services." 47 U.S.C. § 153(16).

is not offering access, but rather is only obtaining access for its own traffic. Thus, we disagree with CompTel's position that IXCs are offering exchange access when they offer and provide exchange access as a part of long distance service. We conclude that a carrier may not obtain interconnection pursuant to section 251(c)(2) for the purpose of terminating interexchange traffic, even if that traffic was originated by a local exchange customer in a different telephone exchange of the same carrier providing the interexchange service, if it does not offer exchange access services to others. As we stated above, however, providers of competitive access services are eligible to receive interconnection pursuant to section 251(c)(2). Thus, traditional IXCs that offer access services in competition with an incumbent LEC (*i.e.*, IXCs that offer access services to other carriers as well as to themselves) are also eligible to obtain interconnection pursuant to section 251(c)(2). For example, when an IXC interconnects at a local switch, bypassing the incumbent LECs' transport network, that IXC may offer access to the local switch in competition with the incumbent. In such a situation, the interconnection point may be considered a section 251(c)(2) interconnection point.

E. Definition of "Technically Feasible"

1. Background

192. In addition to specifying the purposes for which carriers may request interconnection, section 251(c)(2) obligates incumbent LECs to provide interconnection within their networks at any "technically feasible point."[400] Similarly, section 251(c)(3) obligates incumbent LECs to provide access to unbundled elements at any "technically feasible point." Thus our interpretation of the term "technically feasible" applies to both sections.

193. In the NPRM, we sought comment on a "dynamic" definition of "technically feasible" that would provide flexibility for negotiating parties and the states in determining interconnection and unbundling points as network technology evolves.[401] We requested comment on the extent to which network reliability concerns should be included in a technical feasibility analysis, and tentatively concluded that, if such concerns were involved, the incumbent LEC had the burden to support such a claim with detailed information.[402] We also sought comment on the role of other considerations, such as economic burden, in determining technical feasibility under sections 251(c)(2) and 251(c)(3).[403]

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[400] 47 U.S.C. § 251(c)(2)(B).

[401] NPRM at paras. 56-59, 87-88.

[402] *Id.* at paras. 56, 88.

[403] *Id.* at paras. 56-59, 87-88.

194. We also tentatively concluded that interconnection or access at a particular point in one LEC network evidences the technical feasibility of providing the same or similar interconnection or access in another, similarly structured LEC network.[404] Finally, we tentatively concluded that incumbent LECs have the burden of proving the technical infeasibility of providing interconnection or access at a particular point.[405]

2. Comments

195. Commenters offer a wide range of interpretations of the term "technically feasible." Many commenters urge the Commission to offer only broad guidelines with respect to technical feasibility and allow the parties and the states to determine the details.[406] Most BOCs and other LECs argue that "technically feasible" does not mean technically possible or imaginable, and that other factors should be considered in determining what points are technically feasible.[407] Other factors offered by the commenters include cost, network reliability and security, space limitations, the existence of operations support systems, quality of service provided, interoperability, field trials, performance standards, industry standards, the need for construction of new facilities, and inherent fairness.[408] USTA, SBC, and others allege that previous Commission orders have considered economic issues in technical feasibility analyses.[409] GVNW argues that small LECs should not be required to unbundle if it is economically unreasonable.[410] The Rural Telephone Coalition contends that the

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[404] *Id.* at paras. 57, 87.

[405] *Id.* at paras. 58, 87.

[406] *See, e.g.*, USTA comments at 11; Bell Atlantic comments at 15; U S West comments at 44; BellSouth reply at 18; California Commission comments at 19; Texas Commission comments at 11; Citizens Utilities comments at 8 (parties are in the best position to determine the technical requirements and abilities).

[407] *See, e.g.*, SBC comments at 25; BellSouth comments at 16; USTA comments at 11; U S West reply at 22.

[408] *See, e.g.*, NYNEX comments at 65-66; SBC reply at 17; Ameritech comments at 16; ALLTEL comments at 7-8; Roseville Tel. comments at 5-6; U S West reply at 22; Lincoln Tel. reply at 3; *see also* USTA comments at 10-12; Florida Commission comments at 13-14; DoD comments at 6 (network reliability must be considered in technical feasibility). GVNW believes that interconnection is technically feasible if: (1) the interconnection point is a normal LEC access point for provisioning of service to its customers; (2) the LEC maintains assignment records for the point; (3) LEC personnel access facilities at the point for interconnecting other LEC facilities; (4) cross-connecting the facility at the point does not expose the network to undue damage; and (5) the LEC and requesting carriers can demonstrate the technical proficiency of personnel assigned to work at the interconnect point. GVNW comments at 18-19.

[409] *See, e.g.*, USTA comments at 12 n.16; SBC comments at 16.

[410] GVNW comments at 21-22.

Commission should recognize the differences between small and large operations, high-volume and low-volume local networks, and urban and rural carriers and networks.[411] USTA also suggests that the statute only requires incumbent LECs to provide interconnection to their networks as they are configured presently and that it does not require incumbent LECs to take risky or unreasonable steps to construct new facilities or reconfigure their networks in response to competitor requests.[412]

196. Many potential competitors argue that the definition of "technical feasibility" should be extremely broad and dynamic, to encompass the effects of future technical changes.[413] Sprint contends that the Commission should use the plain meaning of the word "feasible" in defining technical feasibility. Sprint states that Webster's Dictionary defines "feasible" as "possible of realization" and any more restrictive reading would unduly restrict the availability of interconnection.[414] Many parties contend that incumbent LECs should have the burden of proving specific points are not technically feasible.[415] Time Warner claims that any point should be presumptively technically feasible and those claiming technical infeasibility should bear the burden of proof.[416] AT&T argues that existing industry standards for interconnection at a point evidences the technical feasibility of interconnection at such a point.[417] MCI argues that technically feasible points of interconnection may be either

[411] Rural Tel. Coalition comments at 31.

[412] *See, e.g.*, USTA comments at 11; BellSouth comments at 16; SBC comments at 25; Lincoln Tel. reply at 3; Roseville Tel. comments at 5-6; Office of the Ohio Consumers' Counsel comments at 10; ALLTEL reply at 5-6.

[413] *See, e.g.*, MCI comments at 12-13; MFS comments at 15; Teleport comments at 25; Nortel comments at 7; Continental Cablevision comments at 20; NCTA comments at 32; Time Warner reply at 13 (all points should be presumptively technically feasible and those claiming technical infeasibility should bear the burden of proof); Colorado Commission comments at 18; Michigan Commission comments at 8-9; Attorneys General of Connecticut *et al.* reply at 4 n.2; Hyperion comments at 10; Independent Cable & Telcomm. Ass'n reply at 9.

[414] Sprint reply at 16; ACSI reply at 6.

[415] *See, e.g.*, MCI comments at 11; Continental Cablevision comments at 20; CompTel comments at 41; Sprint comments at 14; Cox comments at 42; AT&T reply at 11; DoJ comments at 19; California Commission comments at 19; Alabama Commission comments at 15; Ohio Commission comments at 25; Colorado Commission comments at 19.

[416] Time Warner reply at 13; MCI reply at 23 (incumbent LECs do not argue that interconnection points are not technically feasible but rather that the Commission reverse its tentative conclusion that the burden of proof falls on incumbent LECs to demonstrate technical infeasibility); Cable & Wireless comments at 13 (technical feasibility can be assessed by examining the type and quality of interconnection an incumbent LEC already provides to itself, its affiliates and co-carriers).

[417] AT&T comments at 33.

physical, for facilities and equipment, or logical, for software and databases.[418] Several parties ask the Commission to make clear that technical feasibility does not require that operations support systems for order processing, provisioning and installation, billing, and other support functions be in place in order to make a specific interconnection point technically feasible.[419] Several competing carriers also contend that economic factors should not be considered in determining technically feasibile points of interconnection and access to unbundled elements. They argue that if incumbent LECs are not required to expend any funds or resources to provide for technically feasible interconnection or access, competing carriers will be limited to the services currently offered by the incumbents.[420]

197. Some parties propose specific definitions of technical feasibility. For example, Sprint defines "technically feasible" as "possible to accomplish without a scientific or technological breakthrough, *i.e.*, without an advance in the state of the art."[421] MFS defines the term as "any point in an [incumbent LEC's] network where suitable transmission, cross-connect or switching facilities are present to permit the routing of traffic to and from another network."[422]

3. Discussion

198. We conclude that the term "technically feasible" refers solely to technical or operational concerns, rather than economic, space, or site considerations. We further conclude that the obligations imposed by sections 251(c)(2) and 251(c)(3) include modifications to incumbent LEC facilities to the extent necessary to accommodate interconnection or access to network elements. Specific, significant, and demonstrable network reliability concerns associated with providing interconnection or access at a particular point, however, will be regarded as relevant evidence that interconnection or access at that point is technically infeasible. We also conclude that preexisting interconnection or access at a particular point evidences the technical feasibility of interconnection or access at substantially similar points.

[418] MCI comments at 12; IDCMA reply at 6-7.

[419] *See, e.g.*, MCI comments at 12, Sprint reply at 16-17; AT&T reply at 10 (the need for additional investment to make an arrangement available should not result in a determination of technical infeasibility); Time Warner reply at 15, 17; ACTA comments at 10;

[420] *See, e.g.*, AT&T comments at 14-20; MCI reply at 23-29; Sprint reply at 16; Time Warner reply at 16.

[421] Sprint reply at 15-16; Time Warner reply at 13 (any point of interconnection should be presumptively technically feasible).

[422] MFS comments at 15.

Finally, we conclude that incumbent LECs must prove to the appropriate state commission that a particular interconnection or access point is not technically feasibile.

199. We find that the 1996 Act bars consideration of costs in determining "technically feasible" points of interconnection or access. In the 1996 Act, Congress distinguished "technical" considerations from economic concerns. Section 251(f), for example, exempts certain rural LECs from "unduly economically burdensome" obligations imposed by section 251(c) even where satisfaction of such obligations is "technically feasible."[423] Similarly, section 254(h)(2)(A) treats "technically feasible" and "economically reasonable" as separate requirements.[424] Finally, we note that the House committee that considered H.R. 1555 (which was combined with Senate Bill S.652 to form the 1996 Act) dropped the term "economically reasonable" from its unbundling provision. The House committee explicitly addressed this substantive change, reporting that "this requirement could result in certain unbundled . . . elements . . . not being made available."[425] Thus, the deliberate and explained substantive omission of explicit economic requirements in sections 251(c)(2) and 251(c)(3) cannot be undone through an interpretation that such considerations are implicit in the term "technically feasible." Of course, a requesting carrier that wishes a "technically feasible" but expensive interconnection would, pursuant to section 252(d)(1), be required to bear the cost of that interconnection, including a reasonable profit.[426]

200. USTA and SBC cite the Commission's *900 Service* order[427] as support for the contention that costs must be considered in a technical feasibility analysis.[428] In that order, the Commission concluded that "[i]n defining 'technically feasible,' we balance both technical and economic considerations with a view toward providing [900] blocking capability to consumers without imposing undue economic burdens on LECs."[429] Our *900 Service* order,

[423] 47 U.S.C. § 251(f)(1)(A).

[424] 47 U.S.C. § 254(h)(2)(A).

[425] H. Rep. 104-204, 71 (1995).

[426] *See* 47 U.S.C. § 252(d)(1); *see also infra*, Section VII (concluding that requesting carriers must pay incumbent LECs the cost of interconnection or unbundling).

[427] *Policies and Rules Concerning Interstate 900 Telecommunications Services*, Report and Order, 6 FCC Rcd 6166, 6174 (1991) *(900 Service)*.

[428] USTA comments at 12 n.16; SBC reply at 16.

[429] *900 Service* at 6174.

however, has little bearing on our interpretation of the term "technically feasible" in the 1996 Act. As stated above, the 1996 Act distinguishes technical considerations from the "undue economic burdens" considered in the *900 Service* order. Indeed, Congress used virtually the same language—"unduly economically burdensome"—in drawing the distinction.[430] If, as SBC contends, we are to presume that Congress was aware of the Commission's analysis of the technical feasibility of 900 call blocking,[431] the 1996 Act appears squarely to reject that view of technical feasibility. Moreover, unlike the costs of providing 900 call blocking, which we imposed largely on LECs in the *900 Service* order, as noted above, to the extent incumbent LECs incur costs to provide interconnection or access under sections 251(c)(2) or 251(c)(3), incumbent LECs may recover such costs from requesting carriers.

201. In addition to economic considerations, section 251(c)(6) distinguishes considerations of "space limitations" from those of "technical reasons," and thus, in general, we believe existing space or site restrictions should not be included within a technical feasibility analysis.[432] Of course, under section 251(c)(6) "space" restrictions are expressly considered along with "technical" considerations in determining whether an incumbent LEC must provide for physical collocation. Where physical collocation is not practical because of "space limitations," however, incumbent LECs must provide for virtual collocation.[433] Section 251 is silent as to whether an incumbent LEC's duty to provide for virtual collocation or other methods of interconnection or access to unbundled elements is dependent on space constraints. We conclude, as a practical matter, that space limitations at a particular network site, without any possibility of expansion, may render interconnection or access at that point infeasible, technically or otherwise. Where such expansion is possible, however, we conclude that, in light of the distinction drawn in section 251(c)(6), site restrictions do not represent a "technical" obstacle. Again, however, the requesting party would bear the cost of any necessary expansion. Nor do we believe the term "technical," when interpreted in accordance with its ordinary meaning as referring to engineering and operational concerns in the context of sections 251(c)(2) and 251(c)(3),[434] includes consideration of accounting or billing restrictions.

[430] *See* 47 U.S.C. § 251(f)(1)(A).

[431] SBC reply at 16 ("Presumably Congress was aware of this FCC definition of the term "technically feasible" when Congress chose to use it in the 1996 Act.").

[432] 47 U.S.C. § 251(c)(6).

[433] *Id.*

[434] *See* Random House College Dictionary at 1349 ("6. pertaining to or connected with the mechanical or industrial arts and the applied sciences").

202. Several parties also attempt to draw a distinction between what is "feasible" under the terms of the statute, and what is "possible." The words "feasible" and "possible," however, are used synonymously. Feasible is defined as "capable of being accomplished or brought about; possible."[435] The statute itself provides a more meaningful distinction. Unlike the "technically *feasible*" terminology included in sections 251(c)(2) and 251(c)(3), section 251(c)(6) uses the term "*practical* for technical reasons" in determining the scope of an incumbent LEC's obligation to provide for physical collocation.[436] "Practical" is defined as "manifested in practice or action . . . not theoretical or ideal"[437] or "adapted or designed for actual use; useful," and connotes similarity to ordinary usage.[438] Thus, it is reasonable to interpret Congress's use of the term "feasible" in sections 251(c)(2) and 251(c)(3) as encompassing more than what is merely "practical" or similar to what is ordinarily done. That is, use of the term "feasible" implies that interconnecting or providing access to a LEC network element may be feasible at a particular point even if such interconnection or access requires a novel use of, or some modification to, incumbent LEC equipment. This interpretation is consistent with the fact that incumbent LEC networks were not designed to accommodate third-party interconnection or use of network elements at all or even most points within the network. If incumbent LECs were not required, at least to some extent, to adapt their facilities to interconnection or use by other carriers, the purposes of sections 251(c)(2) and 251(c)(3) would often be frustrated. For example, Congress intended to obligate the incumbent to accommodate the new entrant's network architecture by requiring the incumbent to provide interconnection "for the facilities and equipment" of the new entrant. Consistent with that intent, the incumbent must accept the novel use of, and modification to, its network facilities to accommodate the interconnector or to provide access to unbundled elements.

203. We also conclude, however, that legitimate threats to network reliability and security must be considered in evaluating the technical feasibility of interconnection or access to incumbent LEC networks. Negative network reliability effects are necessarily contrary to a finding of technical feasibility. Each carrier must be able to retain responsibility for the management, control, and performance of its own network. Thus, with regard to network reliability and security, to justify a refusal to provide interconnection or access at a point requested by another carrier, incumbent LECs must prove to the state commission, with clear

[435] The American Heritage College Dictionary 499 (1993). Webster's Ninth New Collegiate Dictionary 453 (1989). Both "feasible" and "possible" refer to that which is "capable of being realized" *Id.* at 918.

[436] 47 U.S.C. § 251(c)(6) (emphasis added).

[437] Webster's at 923.

[438] Random House College Dictionary 1040 (rev. ed. 1984).

and convincing evidence, that specific and significant adverse impacts would result from the requested interconnection or access. The reports of the Commission's Network Reliability Council discuss network reliability considerations, and establish templates that list activities that need to occur when service providers connect their networks pursuant to defined interconnection specifications or when they are attempting to define a new network interface specification.[439]

204. We further conclude that successful interconnection or access to an unbundled element at a particular point in a network, using particular facilities, is substantial evidence that interconnection or access is technically feasible at that point, or at substantially similar points in networks employing substantially similar facilities. In comparing networks for this purpose, the substantial similarity of network facilities may be evidenced, for example, by their adherence to the same interface or protocol standards. We also conclude that previous successful interconnection at a particular point in a network at a particular level of quality constitutes substantial evidence that interconnection is technically feasible at that point, or at substantially similar points, at that level of quality. Although most parties agree with this conclusion, some LECs contend that such comparisons are all but impossible because of alleged variability in network technologies, even where the ultimate services offered by separate networks are the same. We believe that, if the facilities are substantially similar, the LECs' contention is adequately addressed.

205. Finally, because sections 251(c)(2) and 251(c)(3) impose duties upon incumbent LECs, we conclude that incumbent LECs must prove to the appropriate state commission that interconnection or access at a point is not technically feasible. Incumbent LECs possess the information necessary to assess the technical feasibility of interconnecting to particular LEC facilities. Further, incumbent LECs have a duty to make available to requesting carriers general information indicating the location and technical characteristics of incumbent LEC network facilities. Without access to such information, competing carriers would be unable to make rational network deployment decisions and could be forced to make inefficient use of their own and incumbent LEC facilities, with anticompetitive effects.

206. We have considered the economic impact of our rules in this section on small incumbent LECs. For example, the Rural Telephone Coalition argues that the Commission should set interconnection points in a flexible manner to recognize the differences between carriers and regions. We do not adopt the Rural Telephone Coalition's position because we believe that, in general, the Act does not permit incumbent LECs to deny interconnection or access to unbundled elements for any reason other than a showing that it is not technically feasible. We believe that this interpretation will advance the procompetitive goals of the

[439] *Network Reliability: A Report to the Nation* (1993, National Engineering Consortium); *Network Reliability: The Path Forward* (1996, Internet: http://www.fcc.gov/oet/nrc).

statute. We also note, however, that section 251(f) of the 1996 Act provides relief to certain small LECs from our regulations implementing section 251.

F. Technically Feasible Points of Interconnection

1. Background

207. In the NPRM, we requested comment on which points within an incumbent LEC's network constitute "technically feasible" points for purposes of section 251(c)(2).[440] Having defined the phrase "technically feasible" above, we now determine a minimum set of technically feasible points of interconnection.

2. Comments

208. Incumbent LECs claim that the specific points of interconnection should either be left to the negotiation process, or that the Commission should require interconnection only at core points, and leave all other points to the negotiation process.[441] For example, Ameritech claims that it is only technically feasible for competitors to interconnect at its end or tandem offices.[442] Bell Atlantic asserts that the trunk- and loop-side of the local switch, transport facilities, tandem facilities, and the signal transfer points (STPs) are the only technically feasible points for interconnection.[443] Potential competitors, on the other hand, argue that interconnection is technically feasible, and should be mandated by the Commission, at numerous points in the incumbent LEC's network.[444] AT&T, for example, argues that interconnection is technically feasible: (1) at the loop concentrator; (2) between the loop feeder element and the competitive provider's switch; (3) between the incumbent LEC's switch and the competitive provider's operator systems; (4) between a competitive provider's switch and a LEC's signaling A link; (5) between a competitive provider's signaling A link

[440] NPRM at paras. 56-59.

[441] *See, e.g.*, USTA comments at 10-11; BellSouth comments at 15-19; NYNEX comments at 65 (points of interconnection should be left to negotiation); Ameritech comments at 13-14; PacTel comments at 21-22; Oregon Commission comments at 25-26.

[442] Ameritech comments at 13-14; Ohio Commission comments at 24.

[443] Bell Atlantic comments at 20-21; Lincoln Tel. comments at 5.

[444] ALTS comments at 18 (interconnection should be available at any technically feasible point regardless of the technical fabric of the network at the requested point); MCI comments at 12-13 (technically feasible points may be either physical, for facilities and equipment, or logical, for software and databases); Time Warner reply at 15 (interconnection should not be limited to "core requirements" because the statute mandates interconnection at any technically feasible point).

and an incumbent LEC's STP; (6) between a competitive provider's dedicated transport and an incumbent LEC's office; and, (7) between incumbent LEC and non-incumbent LEC STPs.[445] MFS argues that, regardless of the specific points listed by the Commission, states should be able to expand the list of technically feasible points.[446]

3. Discussion

209. We conclude that we should identify a minimum list of technically feasible points of interconnection that are critical to facilitating entry by competing local service providers. Section 251(c)(2) gives competing carriers the right to deliver traffic terminating on an incumbent LEC's network at any technically feasible point on that network, rather than obligating such carriers to transport traffic to less convenient or efficient interconnection points. Section 251(c)(2) lowers barriers to competitive entry for carriers that have not deployed ubiquitous networks by permitting them to select the points in an incumbent LEC's network at which they wish to deliver traffic. Moreover, because competing carriers must usually compensate incumbent LECs for the additional costs incurred by providing interconnection, competitors have an incentive to make economically efficient decisions about where to interconnect.[447]

210. We conclude that, at a minimum, incumbent LECs must provide interconnection at the line-side of a local switch (at, for example, the main distribution frame), the trunk-side of a local switch; the trunk interconnection points for a tandem switch; and central office cross-connect points in general. This requirement includes interconnection at those out-of-band signaling transfer points necessary to exchange traffic and access call related databases. All of these points of interconnection are used today by competing carriers, noncompeting carriers, or LECs themselves for the exchange of traffic, and thus we conclude that interconnection at such points is technically feasible.

211. A varied group of commenters, including Bell Atlantic and AT&T, agree that interconnection at the line-side of the switch is technically feasible.[448] Interconnection at this

[445] Letter from Bruce Cox and Betsy Brady, AT&T, to Regina M. Keeney, Common Carrier Bureau, FCC, March 21, 1996, at 29-32 (AT&T March 21 Letter).

[446] MFS comments at 14.

[447] *See* Robert S. Pendyck and Daniel L. Rubinfeld, Microeconomics (2nd ed. 1992).

[448] *See, e.g.*, Bell Atlantic comments at 20-21; NYNEX comments at 65; BellSouth reply at 23; AT&T March 21 Letter at 30.

point is currently provided to some commercial mobile radio service (CMRS) carriers[449] and may be necessary for other competitors that have their own distribution plant, but seek to interconnect to the incumbent's switch. We also agree with numerous commenters that claim that interconnection at the trunk-side of a switch is technically feasible and should be available upon request.[450] Interconnection at this point is currently used by competing carriers to exchange traffic with incumbent LECs. Interconnection to tandem switching facilities is also currently used by IXCs and competing access providers, and is thus technically feasible. Finally, central office cross-connect points, which are designed to facilitate interconnection, are natural points of technically feasible interconnection to, for example, interoffice transmission facilities. There may be rare circumstances where there are true technical barriers to interconnection at the line- or trunk-side of the switch or at central office cross-connect points, however, the parties have not presented us with any such circumstances. Thus, incumbent LECs must prove to the state commissions that such points are not technically feasible interconnection points.

212. We also note that the points of access to unbundled elements discussed below may also serve as points of interconnection (*i.e.*, points in the network that may serve as places where potential competitors may wish to exchange traffic with the incumbent LEC other than for purposes of gaining access to unbundled elements), and thus we incorporate those points by reference here. Finally, as noted above, we have identified a minimum list of technically feasible interconnection points: (1) the line-side of a local switch; (2) the trunk-side of a local switch; (3) the trunk interconnection points for a tandem switch; (4) central office cross-connect points; (5) out-of-band signaling transfer points; and (6) the points of access to unbundled elements. In addition, we anticipate and encourage parties and the states, through negotiation and arbitration, to identify additional points of technically feasible interconnection. We believe that the experience of the parties and the states will benefit our ongoing review of interconnection.

G. Just, Reasonable, and Nondiscriminatory Rates, Terms, and Conditions of Interconnection

1. Background

213. Section 251(c)(2)(D) requires that incumbent LECs provide interconnection "on rates, terms, and conditions that are just, reasonable, and nondiscriminatory."[451] In the NPRM,

[449] AT&T comments in CC Docket No. 95-185 at 6 n.6 (Mar. 4, 1996).

[450] *See, e.g.*, Bell Atlantic comments at 20-21; BellSouth reply at 23; NYNEX comments at 65; Lincoln Tel. comments at 5.

[451] 47 U.S.C. §§ 251(c)(2)(D), 251(c)(3).

we sought comment on whether we should adopt national requirements governing the terms and conditions of providing interconnection. We also sought comment on how we should determine whether the terms and conditions for interconnection arrangements are just, reasonable, and nondiscriminatory, and how we should enforce such rules. In particular, we sought comment on whether we should adopt national guidelines governing installation, service, maintenance, and repair of the incumbent LEC's portion of interconnection facilities.[452]

2. Comments

214. MCI argues that incumbent LECs should not be permitted to set restrictions on the type of traffic that can be combined on a single trunk group unless signaling requirements dictate the need for separate trunk groups. Rather, MCI argues that incumbent LECs should be required to accept one-way and two-way trunk groups.[453] MCI also urges the Commission to require incumbents and competitors to select one point of interconnection (POI) on the other carrier's network at which to exchange traffic. MCI further requests that this POI be the location where the costs and responsibilities of the transporting carrier ends and the terminating carrier begins.[454] NEXTLINK argues that incumbent LECs should only be permitted to require earnest fees of new entrants if such fees are required of other incumbent LEC customers.[455]

215. Many incumbent LECs, state commissions, and others oppose explicit national rules regarding standards for just, reasonable, and nondiscriminatory terms of interconnection

[452] We discuss the rates for interconnection below in Section VII.

[453] MCI comments at 40-41.

[454] Under MCI's proposal, new entrants would be considered co-carriers with incumbent LECs, and each carrier that seeks to interconnect with an incumbent LEC would be required to designate, for each local calling area, at least one point of interconnection (POI) on the other carrier's network. A carrier could designate more than one POI but could not be required to do so. Interconnection would result in the termination of a competing carrier's traffic at at least the same level of service quality that the incumbent LEC provides for terminating its own traffic, without any additional charge to the competing carrier to obtain that level of service. MCI comments at 40-46.

[455] NEXTLINK comments at 19.

and claim that these issues are best resolved through negotiation and arbitration.[456] Several commenters urge the Commission to adopt a rule that only requires that terms and conditions for interconnection points be nondiscriminatory.[457] BellSouth argues that longstanding nondiscrimination reporting requirements have never revealed a problem in the area of installation, maintenance, and repair.[458] Bell Atlantic contends that all arrangements provided by the incumbent LEC for a competitor should be made reciprocal, because new business buildings or residential developments may have only facilities owned by a new entrant. Absent a reciprocity requirement, Bell Atlantic contends that incumbent LECs could be at a competitive disadvantage in competing for those customers. Bell Atlantic also argues that reciprocal interconnection will put a check on potentially unrealistic unbundling requests.[459]

3. Discussion

216. We conclude that minimum national standards for just, reasonable, and nondiscriminatory terms and conditions of interconnection will be in the public interest and will provide guidance to the parties and the states in the arbitration process and thereafter. We believe that national standards will tend to offset the imbalance in bargaining power between incumbent LECs and competitors and encourage fair agreements in the marketplace between parties by setting minimum requirements that new entrants are guaranteed in arbitrations. Negotiations between an incumbent and a new entrant differ from commercial negotiations in a competitive market because new entrants are dependent solely on the incumbent for interconnection.

[456] *See, e.g.*, Ameritech comments at 16-17; BellSouth comments at 20; USTA comments at 18; GTE comments at 21; SNET comments at 14; Alabama Commission comments at 15; California Commission comments at 20; Oregon Commission comments at 26-27; GVNW comments at 15; MECA comments at 25; Ohio Consumers' Counsel comments at 12 (an effective complaint procedure should be adopted rather than overly specific guidelines). The Ohio Commission and PacTel state that performance standards governing installation, maintenance and repair are unnecessary. PacTel contends that states and industry fora such as the Ordering and Billing Forum (OBF) can establish the necessary rules without Commission intervention. PacTel comments at 29; Ohio Commission comments at 26.

[457] *See, e.g.*, Bell Atlantic comments at 31; BellSouth comments at 20-21; SBC comments at 37; GTE reply at 11; California Commission comments at 20; District of Columbia Commission comments at 18-19; Ohio Consumers' Counsel comments at 12.

[458] BellSouth comments at 20-21; *see also* Bell Atlantic comments at 31 (provisioning interconnection and unbundled elements for new entrants is complicated and requires more work than provisioning simple dial tone; the Commission should not mandate that LECs provide interconnection and unbundled elements using the appropriate installation, service, and maintenance intervals that apply to LEC customers and services); Rural Tel. Coalition comments at 32-33 (service intervals for small and rural LECs with respect to provision of interconnection should only be equal to those which the LEC achieves for itself).

[459] Bell Atlantic comments at 32.

217. Section 202(a) of the Act states that "[i]t shall be unlawful for any common carrier to make any unjust or unreasonable discrimination in charges, practices, . . . facilities, or services for or in connection with like communication service . . . by any means or device, or to make or give any undue or unreasonable preference or advantage to any particular person."[460] By comparison, section 251(c)(2) creates a duty for incumbent LECs "to provide . . . any requesting telecommunications carrier, interconnection with a LEC's network on rates, terms, and conditions that are just, reasonable, and nondiscriminatory."[461] The nondiscrimination requirement in section 251(c)(2) is not qualified by the "unjust or unreasonable" language of section 202(a). We therefore conclude that Congress did not intend that the term "nondiscriminatory" in the 1996 Act be synonymous with "unjust and unreasonable discrimination" used in the 1934 Act, but rather, intended a more stringent standard.

218. Given that the incumbent LEC will be providing interconnection to its competitors pursuant to the purpose of the 1996 Act, the LEC has the incentive to discriminate against its competitors by providing them less favorable terms and conditions of interconnection than it provides itself. Permitting such circumstances is inconsistent with the procompetitive purpose of the Act. Therefore, we reject for purposes of section 251, our historical interpretation of "nondiscriminatory," which we interpreted to mean a comparison between what the incumbent LEC provided other parties in a regulated monopoly environment. We believe that the term "nondiscriminatory," as used throughout section 251, applies to the terms and conditions an incumbent LEC imposes on third parties as well as on itself. In any event, by providing interconnection to a competitor in a manner less efficient than an incumbent LEC provides itself, the incumbent LEC violates the duty to be "just" and "reasonable" under section 251(c)(2)(D). Also, incumbent LECs may not discriminate against parties based upon the identity of the carrier (*i.e.*, whether the carrier is a CMRS provider, a CAP, or a competitive LEC). As long as a carrier meets the statutory requirements, as discussed in this section, it has a right to obtain interconnection with the incumbent LEC pursuant to section 251(c)(2).

219. We identify below specific terms and conditions for interconnection in discussing physical or virtual collocation (*i.e.*, two methods of interconnection).[462] We conclude here, however, that where a carrier requesting interconnection pursuant to section 251(c)(2) does not carry a sufficient amount of traffic to justify separate one-way trunks, an incumbent LEC must accommodate two-way trunking upon request where technically feasible. Refusing to

[460] 47 U.S.C. § 202(a).

[461] 47 U.S.C. § 251(c)(2)(D).

[462] *See infra*, Section VI.

provide two-way trunking would raise costs for new entrants and create a barrier to entry. Thus, we conclude that if two-way trunking is technically feasible, it would not be just, reasonable, and nondiscriminatory for the incumbent LEC to refuse to provide it.

220. Finally, as discussed below,[463] we reject Bell Atlantic's suggestion that we impose reciprocal terms and conditions on incumbent LECs and requesting carriers pursuant to section 251(c)(2). Section 251(c)(2) does not impose on non-incumbent LECs the duty to provide interconnection. The obligations of LECs that are not incumbent LECs are generally governed by sections 251(a) and (b), not section 251(c). Also, the statute itself imposes different obligations on incumbent LECs and other LECs (*i.e.*, section 251(b) imposes obligations on all LECs while section 251(c) obligations are imposed only on incumbent LECs). We do note, however, that 251(c)(1) imposes upon a requesting telecommunications carrier a duty to negotiate the terms and conditions of interconnection agreements in good faith. We also conclude that MCI's POI proposal, permitting interconnecting carriers, both competitors and incumbent LECs, to designate points of interconnection on each other's networks, is at this time best addressed in negotiations and arbitrations between parties.[464] We believe that the record on this issue is not sufficiently persuasive to justify Commission action at this time. As market conditions evolve, we will continue to review and revise our rules as necessary.

H. Interconnection that is Equal in Quality

1. Background

221. Section 251(c)(2)(C) requires that the interconnection provided by an incumbent LEC be "at least equal in quality to that provided by the [incumbent LEC] to itself or to any subsidiary, affiliate, or any other party to which the carrier provides interconnection."[465] In the NPRM, we sought comment on how to determine whether interconnection is "equal in quality."

2. Comments

[463] *See infra*, Section XI.A.

[464] Of course, requesting carriers have the right to select points of interconnection at which to exchange traffic with an incumbent LEC under section 251(c)(2).

[465] 47 U.S.C. § 251(c)(2)(C).

222. MFS claims that the incumbent LEC should provide to everyone the highest grade service it makes available to anyone, including neighboring non-competing LECs.[466] MFS also claims that traffic exchange facilities between incumbent LECs and competitors should be designed to meet at least the same technical criteria and grade of service standards (*e.g.*, probability of blocking in peak hours and transmission standards) as used by the incumbent for the inter-office trunks used in its network.[467] Other parties claim that any criteria established by the Commission should not be overly detailed and quantitative or microscopic.[468] The Pennsylvania Commission suggests that "equal in quality" should mean interconnection that is virtually identical to that received by the incumbent LEC itself or its affiliate with no noticeable differences between the two to the end-user.[469] Nortel claims that the definition of "equal in quality" should recognize differences across technologies.[470]

223. Some parties argue that no national standards for "equal in quality" are necessary, and that this determination is best left to a case-by-case determination.[471] GTE claims that it should be acceptable for states to define equal in quality in terms of perception by the end user.[472]

3. Discussion

224. We conclude that the equal in quality standard of section 251(c)(2)(C) requires an incumbent LEC to provide interconnection between its network and that of a requesting carrier at a level of quality that is at least indistinguishable from that which the incumbent provides itself, a subsidiary, an affiliate, or any other party. We agree with MFS that this duty requires incumbent LECs to design interconnection facilities to meet the same technical

[466] MFS comments at 17 (even if higher grade service is offered to a non-competing LEC, the incumbent LEC must offer this service to competitors); Intermedia comments at 4.

[467] MFS comments at 17.

[468] *See, e.g.*, Ameritech comments at 17; Pennsylvania Commission comments at 21; Ohio Consumers' Counsel comments at 13.

[469] Pennsylvania Commission comments at 21.

[470] Nortel comments at 9.

[471] *See, e.g.*, BellSouth comments at 22; USTA comments at 18; GTE comments at 22; Citizens Utilities comments at 11; Alabama Commission comments at 16; Ohio Consumers' Counsel comments at 13 (dispute resolution process should ultimately decide the success or failure of quality-oriented requirements).

[472] GTE comments at 22.

criteria and service standards, such as probability of blocking in peak hours and transmission standards, that are used within their own networks. Contrary to the view of some commenters, we further conclude that the equal in quality obligation imposed by section 251(c)(2) is not limited to the quality perceived by end users. The statutory language contains no such limitation, and creating such a limitation may allow incumbent LECs to discriminate against competitors in a manner imperceptible to end users, but which still provides incumbent LECs with advantages in the marketplace (*e.g.*, the imposition of disparate conditions between carriers on the pricing and ordering of services).

225. We also note that section 251(c)(2) requires interconnection that is "at least" equal in quality to that enjoyed by the incumbent LEC itself. This is a minimum requirement. Moreover, to the extent a carrier requests interconnection of superior or lesser quality than an incumbent LEC currently provides, the incumbent LEC is obligated to provide the requested interconnection arrangement if technically feasible. Requiring incumbent LECs to provide upon request higher quality interconnection than they provide themselves, subsidiaries, or affiliates will permit new entrants to compete with incumbent LECs by offering novel services that require superior interconnection quality. We also conclude that, as long as new entrants compensate incumbent LECs for the economic cost of the higher quality interconnection,[473] competition will be promoted.[474]

[473] *See infra*, Section VII.

[474] *See also* Section VII.E. (discussion of accommodation of interconnection).

V. ACCESS TO UNBUNDLED NETWORK ELEMENTS

A. Commission Authority to Identify Unbundled Network Elements

1. Background

226. Section 251(c)(3) imposes a duty on incumbent LECs to "provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of this section and section 252."[475] This section also requires incumbent LECs to provide these elements "in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service."[476]

227. Section 251(d)(1) provides that "the Commission shall complete all actions necessary to establish regulations to implement the requirements of" section 251 by August 8, 1996.[477] Section 251(d)(2) further provides that, "[i]n determining what network elements should be made available for purposes of subsection (c)(3), the Commission shall consider, at a minimum, whether (A) access to such network elements as are proprietary in nature is necessary; and (B) the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[478]

228. In the NPRM, we sought comment on our tentative conclusion that the 1996 Act requires the Commission to identify network elements that incumbent LECs are required to make available to requesting carriers on an unbundled basis under section 251(c)(3).[479]

[475] 47 U.S.C. § 251(c)(3).

[476] *Id.*

[477] *Id.* at § 251(d)(1).

[478] *Id.* at § 251(d)(2).

[479] NPRM at para. 77.

2. Comments

229. The majority of parties who commented on this issue, including IXCs, potential local competitors, the Department of Justice, state commissions, incumbent LECs, cable interests, and NARUC, agree with our tentative conclusion that sections 251(d)(1) and 251(d)(2) obligate the Commission to identify network elements for purposes of subsection (c)(3).[480] BellSouth, in contrast, interprets section 251(c)(3) as requiring the Commission to identify network elements only when a state commission has failed to carry out its responsibilities under section 252, and the Commission assumes those responsibilities under section 252(e)(5).[481]

3. Discussion

230. We affirm our tentative conclusion in the NPRM that the 1996 Act requires the Commission to identify network elements that incumbent LECs must offer requesting carriers on an unbundled basis under section 251(c)(3). Section 251(d)(1) directs the Commission to establish rules implementing the requirements of section 251(c)(3). Further, section 251(d)(2) contemplates that, pursuant to this direction, the Commission will identify unbundled network elements. We conclude that neither the language in section 251(d), nor any other part of the 1996 Act, is reasonably susceptible to the interpretation advanced by BellSouth that our obligation to identify unbundled network elements arises only when we act under section 252(e)(5).

B. National Requirements for Unbundled Network Elements

1. Background

231. In the NPRM, we noted Congress's view that, when new entrants begin providing services in local telephone markets, it is unlikely they will own network facilities that completely duplicate those of incumbent LECs because of the significant investment and time required to build such facilities.[482] The statutory requirement imposed on incumbent LECs to provide access to unbundled network elements will permit new entrants to offer competing local services by purchasing from incumbents, at cost-based prices, access to

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[480] *See, e.g.*, AT&T comments at 3-16, reply at 16; MFS comments at 36; USTA comments at 20-22; Sprint comments at 21-22; Cable & Wireless comments at 17-19; Ameritech comments at 34; District of Columbia Commission comments at 21-22; ALTS comments at 24-26; NCTA comments at 35-40; DoJ comments at 8-15; TDS comments at 5-6; TCC comments at 11-13; Hyperion reply at 5; Minnesota Commission reply at 8; *accord* GTE comments at 24; NARUC comments at 32.

[481] BellSouth comments at 26-30.

[482] NPRM at para. 75 n.103 *citing* (Joint Explanatory Statement at 148).

elements which they do not already possess, unbundled from those elements that they do not need.[483]

232. It is possible that there will be sufficient demand in some local telephone markets to support the construction of competing local exchange facilities that duplicate most or even all of the elements of an incumbent LEC's network. In these markets new entrants will be able to use unbundled elements from the incumbent LEC to provide services until such time as they complete the construction of their own networks, and thus, no longer need to rely on the facilities of an incumbent to provide local exchange and exchange access services. It is also possible, however, that other local markets, now and even into the future, may not efficiently support duplication of all, or even some, of an incumbent LEC's facilities. Access to unbundled elements in these markets will promote efficient competition for local exchange services because, under the scheme set out in the 1996 Act, such access will allow new entrants to enter local markets by obtaining use of the incumbent LECs' facilities at prices that reflect the incumbents' economies of scale and scope.[484]

233. In the NPRM, we tentatively concluded that the Commission should identify a minimum number of elements that incumbent LECs must make available to requesting carriers on an unbundled basis.[485] We further tentatively concluded that section 252(e)(3) preserves a state's authority, during arbitration, to impose additional unbundling requirements beyond those we specify, as long as such requirements are consistent with the 1996 Act and our regulations.[486] Finally, we tentatively concluded that we have authority to identify additional or different unbundling requirements in the future, as we learn about changes in technology, the innovation of new services, and the necessities of competition.[487]

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[483] NPRM at paras. 75-76.

[484] For a further discussion of the differences between entry into local markets through access to unbundled elements and resale, *see infra*, Section V.H.

[485] NPRM at para. 77.

[486] NPRM at para. 78 and nn.105 & 106. Section 252(e) discusses a state commission's obligations regarding the approval or rejection of agreements between incumbent LECs and requesting telecommunications carriers for interconnection, services or network elements. Subparagraph (3) of this section specifically provides that a state commission is not prohibited "from establishing or enforcing other requirements of State law in its review of an agreement," as long as such requirements do not violate the terms of the statute. 47 U.S.C. § 252(e)(3). We further note that under section 252(f)(2) states may impose additional unbundling requirements during review of BOC statements of generally available terms and conditions. Section 252(f)(2) states that "(e)xcept as provided in section 253, nothing in this section shall prohibit a State commission from establishing or enforcing other requirements of State law in its review of such statement . . ." 47 U.S.C. § 252(f)(2).

[487] NPRM at para. 77.

2. Comments

234. A majority of the commenters addressing this issue support our tentative conclusion that we should identify a minimum list of network elements that incumbent LECs must offer upon request.[488] These commenters argue that, absent national rules, negotiations conducted under section 252 will not proceed as Congress intended, because incumbent LECs have no incentive to provide new entrants with facilities that will be used to compete against them.[489] They contend that a national list of required unbundled elements will hasten the development of local competition and decrease the costs of entry into local telephone markets.[490] For example, they argue that national unbundling requirements will allow carriers entering local markets on a regional or national scale to take advantage of economies of scale

[488] *See, e.g.*, AT&T comments at 3-18; MFS comments at 36; Sprint comments at 21-22; Time Warner comments at 44-45; Cable & Wireless comments at 17-19; MCI comments at 12-20; Continental comments at 16; Comcast comments at 5-9, 20-21; SCG comments at 1-4; NCTA comments at 35-39; LDDS comments at 16; TCC comments at 27; Frontier comments at 13; American Mobile Telecomm. Ass'n comments at 1-8; Omnipoint comments at 17-18; SBC comments at 4; NYNEX comments at 61-64; Ameritech comments at 34; U S West comments at 43-50; Ericsson comments at 2-3; District of Columbia Commission comments at 21; Connecticut Commission comments at 9; Ad Hoc Telecommunications Users Committee comments at 13-14; Citizens Utilities comments at 12; Missouri Commission comments at 7; Nortel comments at 9-11; Cincinnati Bell comments at 15; Ohio Consumers' Counsel comments at 17; North Carolina Commission comments at 21; Illinois Commission comments at 35-36; Washington Commission comments at 19; Municipal Utilities reply at 3-6; Joint Consumer Advocates reply at 7; Attorneys General reply at 6; ATSI reply at 8-9; *accord* Wyoming Commission reply at 23-25 (urging the Commission not to adopt a required list of unbundled elements more detailed than that adopted in Wyoming); *see also* Jones Intercable reply at 4-6 (the Commission should include in its national unbundling requirements a waiver procedure whereby incumbent LECs can demonstrate, in state mediations and arbitrations, their inability to meet a particular requirement in a particular situation); SBA comments at 14-15 (unbundling must go beyond three or four basic elements to maximize the ability of small competitors to fashion a competitive service offering); Hyperion comments at 7-8 (if we do not adopt national rules for unbundled elements small competitors could be hurt because they have fewer resources to negotiate agreements than incumbent LECs); TCA comments at 5-6 (rural incumbent LECs should only be required to offer four essential elements to requesting carriers because of differences between rural and urban areas, and in adopting unbundling requirements the Commission should ensure that rural LECs can meet their universal service obligations).

[489] AT&T comments at 3-12, reply at 9; Teleport comments at 5-10; DoJ comments at 8-15; Ad Hoc Telecommunications Users Committee comments at 17-21; Frontier comments at 14; TCC comments at 7-13; ACSI reply at 7 (if private negotiations were adequate there would be no need to create a statutory duty); *accord* PageNet reply at 5-6; Competition Policy Institute reply at 4-9; *see also* IDCMA reply at 8 (national unbundling requirements will facilitate the ability of new entrants to offer innovative services that would not be possible in the context of differing state requirements).

[490] *See, e.g.*, Continental comments at 16; Comcast comments at 20-22; DoJ comments at 8-15; Cable & Wireless comments at 17-19; TCC comments at 7-13; AT&T comments at 3-12; MCI comments at 4-6; Omnipoint comments at 17-18; ITIC comments at 2-5; Ind. Cable & Telecomm. Ass'n reply at 13; GST reply at 3-6; LDDS comments at 28; *accord, e.g.*, Ohio Commission comments at 31.

in network design,[491] diminish the likelihood of litigation over section 251(c)(3)'s requirements,[492] and provide the financial community with greater certainty as it assesses new entrants' business plans, thus enhancing the ability of new entrants to raise capital at affordable rates.[493]

235. Some commenters suggest that we interpret section 251(c)(3) in a way that maximizes unbundling by requiring incumbent LECs to provide all elements for which unbundling is technically feasible.[494] R. Koch argues that a detailed list of unbundled network elements will enable small entities to obtain the right combination of elements to allow them to offer specialized services.[495] Others suggest that we adopt national rules from which the states could deviate to address state-specific concerns. Parties contend that adopting such an approach (variously titled "safe harbors" or "preferred outcomes") would overcome the disincentives of incumbent LECs to provide network elements to competitors, and would allow states to pursue policies that promote competition more aggressively than the 1996 Act requires.[496] NTIA argues that minimum unbundling requirements would be underinclusive,

[491] *See, e.g.*, NCTA comments at 35-39; DoJ comments at 8-15; AT&T comments at 3-18; MCI comments at 4-6; MCI reply at 32; SCG comments at 1-4; Comcast comments at 6; MFS comments at 36; Cable & Wireless comments at 17-19; Continental comments at 16; Omnipoint comments at 17-18; American Mobile Telcomm. Ass'n comments at 1-5; Ohio Commission comments at 30-31; Nortel comments at 9-11; IDCMA reply at 6-7; Attorneys General reply at 6.

[492] *See, e.g.*, DoJ comments at 8-15; MCI comments at 4-6; AT&T comments at 3-12; *accord* IDCMA reply at 4-6.

[493] MCI comments at 4-6; Continental comments at 16; ITIC comments at 2-5.

[494] DoJ comments at 19-20; *accord* Nextel comments at 9; Ad Hoc Telecommunications Users Committee reply at 6; ACTA comments at 18-19 (arguing that the Commission should require incumbent LECs to unbundle all network elements with exceptions handled through a waiver procedure if the LEC can show that such unbundling is anticompetitive or otherwise not in the public interest); *see also* ASCI comments at 32 (incumbent LECs should be required to provide elements that are not required by the Commission or the States).

[495] R. Koch comments at 2.

[496] *See, e.g.*, Teleport comments at 5-10, 33-34; ALTS comments at 2-4; PacTel comments at 40-44 (the Commission should identify a list of unbundled network elements that are sufficient but not mandatory to comply with section 251); PacTel reply at 2; TRACER reply at 5-6; *see also* Texas Commission comments at 14; Florida Commission comments at 16-17 (the Commission should identify categories rather than specific elements); Pennsylvania Commission reply at 8-21 (the Commission should adopt minimum requirements only where necessary; such requirements should be broad enough to accommodate variations among states because of local technical, demographic and geographic differences); Colorado Commission comments at 25 (the Commission should adopt recommendations for required network elements, and allow the states to identify them and experiment); Rural Tel. Coalition reply at 5 (the Commission should provide guidance to the states rather than imposing detailed unbundling requirements, which would not be consistent with the deregulatory objectives of the 1996 Act); Competition Policy Institute reply at 9; Alaska Tel. Ass'n comments 2-3.

but detailed unbundling rules would provide insufficient flexibility to the states. NTIA thus recommends that the Commission require incumbent LECs to unbundle five different network elements, and mandate that the states require further unbundling consistent with local conditions.[497]

236. BellSouth, U S West, SNET and COMAV argue against the Commission's identification of a minimum list of required unbundled network elements. These parties contend that the provision of unbundled elements should be left entirely to parties in voluntary negotiations in order to accommodate state variations and to avoid requests for elements that competitors do not need, but nevertheless request in an effort to raise incumbent LECs' costs. These parties contend that national unbundling requirements would: dampen technological development because minimum requirements would be set at the lowest common denominator, retard the development of competition by complicating the regulatory review process, and curtail the incentives of incumbent LECs to develop new technologies and services.[498] Maine Commission, *et al.*, Colorado Independent Telephone Association, Home Telephone Company, the Rural Telephone Coalition, and Illinois Independent Telephone Association argue that national unbundling requirements would be unworkable because of technological, demographic and geographic variations among states. They contend that such rules would be particularly harmful to rural areas, and rural incumbent LECs, and that states must have flexibility to determine unbundling requirements that address state-specific concerns.[499]

237. GVNW and the Minnesota Independent Coalition argue that national unbundling requirements imposed on small incumbent LECs should differ from those imposed on large, urban incumbent LECs because of differences in networks and operational procedures.[500] The Rural Telephone Coalition contends that unbundling requirements for small and rural LECs should be limited "to those instances where it is technically feasible, specifically needed by a competitor and economically reasonable."[501]

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[497] NTIA reply at 7-14.

[498] BellSouth comments at 16-19, 30-34; SNET comments at 18-24; U S West comments, Harris/Yao Report at 17; *see also* USTA reply at 10-13 (to encourage facilities-based competition the Commission should implement section 251(c)(3) in a way that provides parties with maximum flexibility); COMAV comments at 20 (because there is no clear definition of a network element, parties should be left to negotiate for what they want).

[499] Maine Commission, *et al.* comments at 2-10; Colorado Ind. Tel. Ass'n comments at 2; Home Tel. comments at 1-2; Illinois Ind. Tel. Ass'n comments at 1-2; *accord* Pennsylvania Commission reply at 15-16; Rural Tel. Coalition comments at 31-33.

[500] GVNW comments at 4-15; Minn. Ind. Coalition comments at 6-7.

[501] Rural Tel. Coalition comments at 31-33; *see also* GVNW comments at 21.

238. A broad range of parties support our tentative conclusion that states may impose additional unbundling requirements beyond those we specify as long as such requirements are consistent with the 1996 Act and our regulations.[502] A number of parties, including IXCs, state commissions, cable operators, CAPs, and new entrants, support our tentative conclusion that the Commission can establish additional or different unbundling requirements in the future as services, technology, and the needs of competing carriers evolve.[503] The Connecticut and Wyoming Commissions, in contrast, oppose this tentative conclusion. They argue that states should consider future unbundling requirements because they are more familiar with local networks and thus, will be able to address feasibility issues more efficiently.[504]

239. Yet another group of commenters, including incumbent LECs and state commissions, contend that future unbundling requirements should be determined by parties through voluntary negotiations.[505] Some argue that such negotiations should proceed under a Commission-mandated bona fide request (BFR) process.[506] USTA suggests that this process should include, for example, requirements regarding the timeliness of LEC responses to

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[502] *See, e.g.*, TCC comments at 11-13, 34; NARUC comments at 32; Texas Commission comments at 15-16; Cable & Wireless comments at 17-19; MCI comments at 12-20; AT&T comments at 12-18; District of Columbia Commission comments at 21; ALTS comments at 24-26; USTA comments at 23; Colorado Commission comments at 24; Sprint comments at 21-22; ACSI comments at 32-34; CompTel comments at 32; Alabama Commission comments at 18; Oregon Commission comments at 24; LDDS comments at 28; GCI comments at 11; Municipal Utilities comments at 28; Ohio Consumers' Counsel comments at 17; Telecommunications Resellers Ass'n comments at 32; TIA comments at 9; TDS comments at 13-14; California Commission comments at 26; Illinois Commission comments at 35-36; Washington Commission comments at 19; Citizens Utilities comments at 12; Nortel comments at 10; Wyoming Commission comments at 23-25; *accord* Ohio Commission comments at 30-31 (it must be clear in whatever forum a BOC request for interexchange authority is reviewed that BOCs must comply with the state unbundling requirements).

[503] AT&T comments at 15-18; Texas Commission comments at 14-15; MCI comments at 12-20; Continental comments at 19; ALTS comments at 24-26; Pennsylvania Commission comments at 23; LDDS comments at 28; North Carolina Commission comments at 22; SBC comments at 4, 31; Oregon Commission comments at 2; Cable & Wireless comments at 17-19; Comcast comments at 19-21; *accord* CompTel comments at 40 (Commission should establish expedited procedures to permit carriers to request that the Commission identify additional elements); Sprint comments at 21-22 (future unbundling requirements can be identified both by the Commission and the states); NCTA comments at 37-38 (Commission should not leave to negotiations the identification of additional unbundled elements); TCC comments at 34 (unless the Commission states that it can adopt further unbundling requirements in the future, incumbent LECs will claim they need only provide the elements originally identified by the Commission).

[504] Connecticut Commission comments at 9; Wyoming Commission comments at 23-25.

[505] *See, e.g.*, Ameritech comments at 34-35; NYNEX comments at 61-64; Bell Atlantic comments at 15-20; ACSI comments at 33; USTA comments at ii; Ohio Commission comments at 32; GTE comments at 28 (impossible to determine in advance every element for which it is technically feasible to unbundle because such a determination must consider the service for which the element will be used and other issues); SBC reply at 18-19; New Hampshire Commission, *et al.* reply at 23.

[506] *See, e.g.*, Ameritech comments at 34-35; ASCI comments at 33; Ohio Commission comments at 32; SBC reply at 18-19.

requests, and commitments by requesting carriers to purchase requested elements and bear the cost of developmental efforts.[507] Bell Atlantic and SBC argue that a BFR process would clarify the duties of incumbent LECs and requesting carriers so that neither engage in gamesmanship,[508] prohibit sham requests intended to delay BOC entry into the in-region, interLATA market,[509] assist arbitrations by requiring the development of a record before the arbitrations commence,[510] and eliminate waste caused by regulatory requirements to unbundle "theoretical network components."[511]

240. A number of potential local competitors oppose identification of unbundled elements in the future by means of voluntary negotiations and a BFR process. In addition, they oppose the criteria offered by a number of incumbent LECs that would be used to identify future unbundling requirements in the context of the BFR process.[512] For example, AT&T argues that the factors in the BFR process proposed by USTA would impose anticompetitive reciprocity requirements and delays.[513] MCI and Sprint oppose USTA's proposal because it would require new entrants to commit to purchasing elements before they know the terms, including prices, under which the LEC will provide such elements.[514] MCI contends that, in a BFR process, LECs should be required to provide an up-to-date inventory of facilities with all information necessary to determine technical feasibility. Conversely, Sprint argues that it is reasonable to ask new entrants to provide technical information and projected demand quantities.[515]

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[507] USTA comments at 14-16.

[508] Both Bell Atlantic and SBC assert that they have developed items for carriers that were never actually ordered. Bell Atlantic comments at 17-20; SBC reply at 18-19.

[509] Bell Atlantic comments at 17-20.

[510] Bell Atlantic comments at 17-20; Bell Atlantic reply at 7.

[511] Bell Atlantic comments at 17-20; Bell Atlantic reply at 7.

[512] CompTel comments at 41; AT&T reply at 16; MCI reply at 23-30; LDDS reply at 11-12; ALTS reply at 32-34; Sprint reply at 18; Hyperion reply at 5-6; *see also* CFA/CU reply at 22.

[513] AT&T reply at 16.

[514] MCI reply at 23-30; Sprint reply at 18.

[515] MCI reply at 23-30; Sprint reply at 18.

3. Discussion

241. We adopt our tentative conclusion and identify a minimum list of unbundled network elements that incumbent LECs must make available to new entrants upon request. We believe the procompetitive goals of section 251(c)(3) will best be achieved through the adoption of such a list. As discussed above,[516] we believe that negotiations and arbitrations will best promote efficient, rapid, and widespread new entry if we establish certain minimum national unbundling requirements. As the Department of Justice argues, there is "no basis in economic theory or in experience to expect incumbent monopolists to quickly negotiate arrangements to facilitate disciplining entry by would-be competitors, absent clear legal requirements to do so."[517] Ad Hoc Telecommunications Users Committee notes that "[h]istorically, the [incumbent LECs] have had strong incentives to resist, and have actively resisted, efforts to open their networks to users, competitors, or new technology-driven applications of network technology."[518]

242. National requirements for unbundled elements will allow new entrants, including small entities, seeking to enter local markets on a national or regional scale to take advantage of economies of scale in network design. If fifty states were to establish different unbundling requirements, new entrants, including small entities, could be denied the benefits of scale economies in obtaining access to unbundled elements. National requirements will also: reduce the number of issues states must consider in arbitrations, thereby facilitating the states' ability to conduct such proceedings; reduce the likelihood of litigation regarding the requirements of section 251(c)(3) and the costs associated with such litigation; and provide financial markets with greater certainty in assessing new entrants' business plans, thus enhancing the ability of new entrants, including small entities, to raise capital. In addition, to the extent the Commission assumes a state's arbitration authority under section 252(e)(5), national requirements for unbundled elements will help the Commission to conclude such proceedings expeditiously.[519]

243. We reject the alternative option of developing an exhaustive list of required unbundled elements, to which states could not add additional elements, on the grounds that

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[516] *See supra*, Section V.B.

[517] DoJ comments at 8-15; *accord* Ad Hoc Telecommunications Users Committee comments at 17-21 (incumbent monopolists in the telecommunications industry have a long history of resisting the facilitation of competition, noting experiences with customer premises equipment (CPE) interconnection, local exchange access for long distance carriers, and the FCC's *Computer II* and *Computer III* proceedings).

[518] Ad Hoc Telecommunications Users Committee comments at 17; *see also infra*, Section VII.

[519] *See supra*, Sections II.A, II.B.

such a list would not necessarily accommodate changes in technology, and it would not provide states the flexibility they need to deal with local conditions.

244. We also reject the proposal advanced by several parties that we should adopt non-binding national guidelines for unbundled elements that states would not be required to enforce. The parties asserting that differences between incumbent LEC networks militate against the adoption of national standards provide few, if any, specific examples of what those differences are. In addition, they fail to articulate persuasively why those differences are significant enough to weigh against the adoption of national requirements.[520] Accordingly, and as previously discussed,[521] we conclude that any differences that may exist among states are not sufficiently great to overcome the procompetitive benefits that would result from establishing a minimum set of binding national rules.[522] Moreover, we believe the authority granted the states in section 252(e)(3), as well as our existing rules which set forth a process by which incumbent LECs can request a waiver of the requirements we adopt here, will provide the necessary flexibility in our rules to permit states and parties to accommodate any truly unique state conditions that might exist.[523] Accordingly, we adopt our tentative conclusion that states may impose additional unbundling requirements pursuant to section 252(e)(3), as long as such requirements are consistent with the 1996 Act and our regulations.

[520] The Florida Commission argues that we should not require incumbent LECs to offer a 4-wire ISDN loop as an unbundled element because some incumbents in Florida do not offer ISDN. Florida Commission comments at 16-17. Our rules accommodate the concern raised by the Florida Commission because they require requesting carriers to pay for the costs of obtaining access to unbundled network elements. Accordingly, if a requesting carrier seeks a 4-wire ISDN loop from an incumbent LEC that does not employ such an element, the requesting carrier will have to pay for it pursuant to our pricing rules. *See infra*, Section VII. Maine Commission *et. al.* argues generally that embedded networks have evolved over time and most network architectures are different. *See* Maine Commission *et. al.* comments at 2-4. They do not explain, however, why national rules could not accommodate such differences. PacTel argues that local loops may be made of copper or fiber optics, or they may be digital or analog, and thus, the Commission cannot determine the elements that should be unbundled without dictating network technologies. PacTel comments at 42-44. We do not believe that the adoption of national rules identifying a minimum list of unbundled network elements will lead to regulation determining network architectures. To the contrary, our rules will provide new entrants with the opportunity to obtain access to a number of different variants of a particular element, and thus they will facilitate the ability of the market to dictate network architectures. For example, in this order we identify a number of different types of local loops as network elements. *See infra*, Section V.J. Incumbent LECs will be required to provision such elements only if they are requested by new entrants. It is unlikely that new entrants will request and pay for elements unless they believe that there is likely to be some market demand for the services that can be provided over such elements.

[521] *See supra*, Sections II.A & II.B.

[522] *See* DoJ comments at 8-15 (the differences between states are not significant enough to "militate against" national requirements); AT&T comments at 14-18 (there are no conditions unique to one state, hence, all variations can be accommodated in national rules that include a waiver process for unusual conditions.)

[523] We further observed in the NPRM that under the voluntary negotiation paradigm set out in section 252, parties to such negotiations can agree to provide unbundled network elements that differ from those identified by the Commission. *See* NPRM at para. 78 (*citing* 47 U.S.C. § 252(a)).

This conclusion is consistent with the statement in section 252(e)(3) that "nothing in this section shall prohibit a State commission from establishing or enforcing other requirements of State law in its review of an agreement."[524]

245. We find the arguments presented by parties opposing national rules for unbundled elements unpersuasive especially in light of the 1996 Act's strong procompetitive goals. For example, in light of the incumbent LECs' disincentives to negotiate with potential competitors, we believe national rules will promote competition by making the bargaining strength of potential competitors, including small entities, more equal. We are not persuaded that national rules will discourage incumbent LECs from developing new technologies and services; to the contrary, based on our experience in other telecommunications markets, we believe that competition will stimulate innovation by incumbent LECs. We also believe that any failure of incumbent LECs to develop new technologies or services would have a less significant adverse effect on competition in local exchange markets than a failure to adopt national rules. Nor is it likely that new entrants will seek unnecessary elements merely to raise incumbents' costs because such new entrants must pay the costs associated with unbundling. In addition, the pricing standard of section 252(d)(1)(B), which allows incumbent LECs to receive not only their costs but also a reasonable profit on the provision of unbundled elements, should further alleviate concerns regarding sham requests.[525]

246. We adopt our tentative conclusion that, in addition to identifying unbundled network elements that incumbent LECs must make available now, we have authority to identify additional, or perhaps different, unbundling requirements that would apply to incumbent LECs in the future. The rapid pace and ever changing nature of technological advancement in the telecommunications industry makes it essential that we retain the ability to revise our rules as circumstances change.[526] Otherwise, our rules might impede technological change and frustrate the 1996 Act's overriding goal of bringing the benefits of competition to consumers of local phone services. For the same reasons that we believe we should adopt national unbundling requirements, as discussed above,[527] we reject the proposal that future unbundling requirements should be determined solely by the parties to voluntary negotiations.

247. Finally, we have considered the economic impact of our rules in this section on small incumbent LECs. For example, we have considered the argument advanced by the

[524] 47 U.S.C. § 252(e)(3).

[525] *See infra*, Section VII.

[526] *See* 47 U.S.C. § 254(c)(1).

[527] *See also supra*, Sections II.A, II.B.

Rural Telephone Coalition that national unbundling requirements would be unworkable because of technological, demographic and geographic variations between states. We do not adopt the Rural Telephone Coalition's position, however, because we believe that the minimum list we adopt can be applied to a broad range of networks across geographic regions and any differences between incumbent LEC networks in different states are not sufficiently great to overcome the procompetitive benefits of a minimum list of required unbundled network elements. We have also considered the argument advanced by GVNW that unbundling requirements imposed on small incumbent LECs should differ from those imposed on large, urban incumbent LECs because of differences in networks and operational procedures. We reject GVNW's proposal for two reasons. First, some small incumbent LECs may not experience any problems complying with our unbundling rules. Second, we note that section 251(f) of the 1996 Act provides relief to certain small LECs from our regulations implementing section 251.

248. Although we have concluded in this proceeding that we can best achieve the procompetitive aims of the 1996 Act by adopting minimum national unbundling requirements for arbitrated agreements, the 1996 Act envisions that the states will administer those requirements through approval of negotiated agreements and arbitrations.[528] Through arbitrations and review of negotiated agreements the states will add to their significant expertise on issues relating to the provision of access to unbundled network elements. We encourage state commissions to take an active role in evaluating the success or difficulties in implementing any of our requirements. The Commission intends to draw on the expertise developed by the states when we review and revise our rules as necessary.

C. Network Elements

1. Background

249. Section 3(29) of the Communications Act defines the term "network element" to mean both "a facility or equipment used in the provision of a telecommunications service" and "features, functions, and capabilities that are provided by means of such facility or equipment."[529] Such features, functions, and capabilities include "subscriber numbers, databases, signaling systems, and information sufficient for billing and collection or used in the transmission, routing, or other provision of a telecommunications service."[530] The Joint Explanatory Statement explains that "[t]he term 'network element' was included to describe

[528] 47 U.S.C. § 252.

[529] 47 U.S.C. § 153(29).

[530] *Id.*

the facilities, such as local loops, equipment, such as switching, and the features, functions, and capabilities that a local exchange carrier must provide for certain purposes under other sections of the conference agreement."[531]

250. In the NPRM, we noted that we could identify "network elements" in two ways. First, we could identify a single "network element," and then further subdivide it into additional "elements." Alternatively, we could provide that, once we identify a particular "network element," it cannot be further subdivided. In the NPRM, we asked for comment on these two approaches.[532]

251. We observed in the NPRM that the statutory definition of a "network element" draws a distinction between a "facility or equipment used in the provision of a telecommunications service," and the "service" itself.[533] We asked for comment on the meaning of this distinction in general, with respect to requirements for unbundling, and in connection with specific unbundled elements. We noted that the definition of a network element, *i.e.*, a facility, function, or capability, is not dependent on the particular types of services that are provided by means of the element (*e.g.*, interstate access, intrastate local exchange), and asked whether a carrier purchasing access to an element is obligated, pursuant to the definition, to provide all services typically carried or provided by that element.[534]

2. Comments

252. A number of parties, including potential local competitors and state commissions, support the adoption of a flexible method for identifying network elements. They argue that a flexible method is necessary to accommodate future changes in technology.[535] NYNEX, the Texas Public Utility Counsel, and GVNW contend that, to accommodate such changes, we

[531] Joint Explanatory Statement at 116.

[532] NPRM at para. 83.

[533] NPRM at para. 51, (*citing* 47 U.S.C. § 153(29)).

[534] NPRM at para. 84.

[535] District of Columbia Commission comments at 21-22; MFS comments at 36; Cable & Wireless comments at 17-19; Ericsson comments at 3; Alabama Commission comments at 19; ACSI comments at 30; Ohio Commission comments at 33; Florida Commission comments at 18; Hyperion comments at 18; GST comments at 16; LDDS comments at 29; Ohio Consumers' Counsel comments at 18; Nextel comments at 8; Time Warner comments at 44-45 (the Commission should identify elements in a way that gives parties maximum flexibility); *but see* Ad Hoc Telecommunications Users Committee comments at 15-16 (define elements narrowly to give maximum flexibility to offer innovative services).

should not define elements in rigid terms, or by specific technologies, but rather by general function.[536]

253. In contrast, PacTel argues that the Commission should not require the unbundling of elements beyond those noted in other parts of the statute, and thus we need not develop a flexible method for identifying network elements.[537] BellSouth contends that, while flexibility is preferable, parties should be able to decide "whatever level of granularity makes sense for them" in voluntary negotiations.[538]

254. A number of parties assert that we should define a network element by its functionality and capabilities, and not as separate services.[539] MCI asserts that elements can be used to provide a number of different services and thus are not service-specific. MCI further argues that elements should include all of their embedded features and functionalities so carriers can use them to provide both existing services that are already offered by incumbent LECs, and new ones that currently are not.[540] GTE contends that incumbent LECs use a wide variety of databases, functions and capabilities in their networks, but the definition of a network element is limited to those databases, functions and capabilities that are employed in the transmission, routing, or other provision of a telecommunications service. Thus, GTE would exclude from the definition features used in conjunction with, but not in the actual provision of, a telecommunications service as well as features used to provide information or other non-telecommunications services.[541]

255. AT&T asserts that vertical features (*i.e.*, custom calling or Custom Local Area Signaling Services ("CLASS")) are network elements because they constitute a function or a capability and are not by nature a jurisdictionally distinct service that can only be provided on

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[536] NYNEX comments at 61-64; GVNW comments at 17-18; Texas Public Utility Counsel comments at 8-9.

[537] PacTel comments at 44-45; *see also* MECA comments at 28 (the Commission should not define network elements flexibly); COMAV comments at 20 (because a network element cannot be defined, the parties should decide what facilities they want during negotiations).

[538] BellSouth comments at 30-31.

[539] BellSouth comments at 30-31,62; MFS comments at 36-37, 65-66; Cable & Wireless comments at 26-27; MCI comments at 27-28; Lincoln Tel. comments at 7; GST comments at 6; Sprint comments at 22-23; Illinois Commission comments at 36-37; *see also* Intermedia comments at 12-13 (the Commission should not draw artificial distinctions between facilities and services as an unbundled element is not useful if it cannot support an end-to-end service).

[540] MCI comments at 27-28; *accord* Sprint comments at 22-23.

[541] GTE comments at 25-27; GTE reply at 16.

either an inter- or intra-state basis.[542] A number of incumbent LECs argue in opposition that vertical features are not physical elements of the incumbent LEC networks, but are retail services. They further argue that, if we allow new entrants to purchase such features as unbundled elements, we would nullify section 251(c)(4).[543] Ameritech also contends that vertical features are often priced significantly above cost, and for this reason carriers should not be allowed to obtain such services as unbundled elements.[544] Sprint claims that electronic interfaces (*e.g.*, administrative databases) used for the provision of unbundled elements can be considered network elements themselves.[545] A number of incumbent LECs, however, variously argue that such administrative databases, operator services, directory assistance, or electronic gateways are not network elements because new entrants do not need access to their features and functions to provide a telecommunications service. Moreover, these parties dispute claims that their features and functions are physical elements of the incumbents' networks. These parties characterize them as services. They further contend that it is not technically feasible or would be prohibitively expensive to provide access to such databases or electronic gateways and that requiring incumbent LECs to provision them as unbundled elements would both risk the security of those systems and reveal proprietary information.[546]

256. Commenters set forth a variety of views on the issue of whether the services or facility distinction requires carriers using an unbundled element to offer all services provided with that element. CompTel and MECA contend that the statute imposes such a requirement.[547] Sprint argues that a carrier purchasing an unbundled switch and loop must provide local exchange and exchange access services.[548] USTA and the Department of Justice contend that carriers must purchase exclusive access to an unbundled loop, and thus, must

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[542] AT&T reply at 15-16.

[543] Ameritech reply at 24 n.38; PacTel reply at 25; Bell Atlantic reply at 6; USTA comments at 23-26; GTE comments at 25-26. Section 251(c)(4) provides that incumbent LECs have the duty "to offer for resale at wholesale rates any telecommunications service that the carrier provides at retail to subscribers that are not telecommunications carriers." 47 U.S.C. § 251(c)(4). For a further discussion of the relationship between sections 251(c)(3) and 251(c)(4), *see infra*, Section V.H.

[544] Ameritech reply at 24 n.38.

[545] Sprint reply at 26.

[546] Ameritech reply at 19-20; U S West reply at 27; USTA reply at 17-18; NYNEX reply at 33-34 (while electronic gateways are not network elements, it is reasonable to request access to them); PacTel reply at 21-22; BellSouth reply at 24-30.

[547] Comptel comments at 24; MECA comments at 31.

[548] Sprint comments at 22-23.

provide all services carried over it.[549] The Department of Justice notes that this interpretation is required by practicality, and is consistent with industry practice at the time the 1996 Act was adopted.[550] The Department of Justice also notes that a local loop is a nontraffic sensitive facility, and thus it would be difficult to apportion the cost of such a facility among a number of different users.[551]

257. In contrast, a number of potential local competitors, as well as the Ohio and Oregon Commissions, contend that, according to the language of the 1996 Act, a carrier is not required to offer all services that an element makes possible. These parties variously argue that such a requirement would be unenforceable and anticompetitive, would stifle creativity in service offerings, and is contrary to the market-based policies inherent in the 1996 Act.[552]

3. Discussion

258. We adopt the concept of unbundled elements as physical facilities of the network, together with the features, functions, and capabilities associated with those facilities. Carriers requesting use of unbundled elements within the incumbent LEC's network seek in effect to purchase the right to obtain exclusive access to an entire facility, or use of some feature, function or capability of that element. For some elements, especially the loop, the requesting carrier will purchase exclusive access to the element for a specific period, such as on a monthly basis. Carriers seeking other elements, especially shared facilities such as common transport, are essentially purchasing access to a functionality of the incumbent's facilities on a minute-by-minute basis. This concept of network elements, as discussed *infra* at section V.G., does not alter the incumbent LEC's physical control or ability or duty to repair and maintain network elements.

259. We conclude that we should identify a particular facility or capability, for example, as a single network element, but allow ourselves and the states (where appropriate) the discretion to further identify, within that single facility or capability, additional required network elements. Thus, for example, in this proceeding, we identify the local loop as a

[549] USTA comments at 56-66; DoJ comments at 35-47.

[550] DoJ comments at 35-47.

[551] DoJ comments at 35-47.

[552] MCI comments at 27-28; ACTA comments at 17; LDDS comments at 30; MFS comments at 36-37,65-66; Cable & Wireless comments at 26-27; Frontier comments at 9; Ohio Commission comments at 33; Oregon Commission comments at 27; *accord* Citizens Utilities comments at 9.

single network element.[553] We also ask the states to evaluate, on a case-by-case basis, whether to require access to subloop elements, which can be facilities or capabilities within the local loop.[554] We agree with those commenters that argue that identifying a particular facility or capability as single network element, but allowing such elements to be further subdivided into additional elements, will allow our rules (as well as the states) to accommodate changes in technology, and thus better serve the interests of new entrants and incumbent LECs, and the procompetitive purposes of the 1996 Act.[555] We are not persuaded by PacTel's argument that it is unnecessary for our rules to permit the identification of additional elements, beyond those specifically referenced in parts of the 1996 Act, because our rules must conform to the definition of a network element, and they must accommodate changes in technology. Nor are we persuaded by BellSouth that identification of network elements should be left solely to the parties. We reject this approach for the same reasons that led us to adopt national unbundling requirements.[556] Finally, we agree with NYNEX and others that we should not identify elements in rigid terms, but rather by function.

260. We agree with MCI and MFS that the definition of the term network element includes physical facilities, such as a loop, switch, or other node, as well as logical features, functions, and capabilities that are provided by, for example, software located in a physical facility such as a switch.[557] We further agree with MCI that the embedded features and functions within a network element are part of the characteristics of that element and may not be removed from it. Accordingly, incumbent LECs must provide network elements along with all of their features and functions, so that new entrants may offer services that compete with those offered by incumbents as well as new services.

261. The only limitation that the statute imposes on the definition of a network element is that it must be "used in the provision of a telecommunications service."[558] Incumbent LECs provide telecommunications services not only through network facilities that serve as the basis for a particular service, or that accomplish physical delivery, but also through information (such as billing information) that enables incumbents to offer services on

[553] *See infra*, Section V.J.

[554] *Id.*

[555] *See, e.g.*, District of Columbia Commission comments at 21-22; MFS comments at 36.

[556] *See supra*, Sections II.A, II.B, V.B.

[557] MCI comments at 27-28; MFS comments at 36-37.

[558] 47 U.S.C. § 153(29).

a commercial basis to consumers. Our interpretation of the term "provision" finds support in the definition of the term "network element." That definition provides that the type of information that may constitute a feature or function includes information "used in the transmission, routing or other provision of a telecommunications service."[559] Since "transmission" and "routing" refer to physical delivery, the phrase "or other provision of a telecommunications service" goes beyond mere physical delivery.

262. We conclude that the definition of the term "network element" broadly includes all "facilit[ies] or equipment used in the provision of a telecommunications service," and all "features, functions, and capabilities that are provided by means of such facility or equipment, including subscriber numbers, databases, signaling systems, and information sufficient for billing and collection or used in the transmission, routing, or other provision of a telecommunications service."[560] This definition thus includes, but is not limited to, transport trunks, call-related databases, software used in such databases, and all other unbundled elements that we identify in this proceeding.[561] The definition also includes information that incumbent LECs use to provide telecommunications functions commercially, such as information required for pre-ordering,[562] ordering, provisioning,[563] billing, and maintenance and repair services. This interpretation of the definition of the term "network element" will serve to guide both the Commission and the states in evaluating further unbundling requirements beyond those we identify in this proceeding.

263. We disagree with those incumbent LECs which argue that features that are sold directly to end users as retail services, such as vertical features, cannot be considered elements within incumbent LEC networks.[564] If we were to conclude that any functionality sold directly to end users as a service, such as call forwarding or caller ID, cannot be defined as a network element, then incumbent LECs could provide local service to end users by selling them unbundled loops and switch elements, and thereby entirely evade the unbundling

[559] *Id.*

[560] *Id.*

[561] *See infra*, V.J.

[562] *See infra*, Section V.J.5, for a definition of pre-ordering services.

[563] The term "provisioning" includes installation.

[564] *See infra*, Section V.J, discussing vertical features and noting that the Illinois Commission has rejected arguments that vertical features cannot be incorporated into network elements.

requirement in section 251(c)(3).[565] We are confident that Congress did not intend such a result. We further reject Ameritech's argument that we should not permit carriers to use unbundled elements to provide services that are priced above cost at retail. We agree with those parties that argue that competition will not develop if we find that supracompetitive pricing is protected by the 1996 Act.[566]

264. Moreover, we agree with those commenters that argue that network elements are defined by facilities or their functionalities or capabilities, and thus, cannot be defined as specific services. A single network element could be used to provide many different services. For example, a local loop can be used to provision inter- and intrastate exchange access services, as well as local exchange services. We conclude, consistent with the findings of the Ohio and Oregon Commissions, that the plain language of section 251(c)(3) does not obligate carriers purchasing access to network elements to provide all services that an unbundled element is capable of providing or that are typically offered over that element.[567] Section 251(c)(3) does not impose any service-related restrictions or requirements on requesting carriers in connection with the use of unbundled elements.

D. Access to Network Elements

1. Background

265. In the NPRM, we observed that section 251(c)(3) requires incumbent LECs to provide "access" to network elements "on an unbundled basis."[568] We interpreted these terms to mean that incumbent LECs must provide carriers with the functionality of a particular element, separate from the functionality of other elements, and must charge a separate fee for each element. We sought comment on this interpretation and any alternative interpretations.[569]

[565] *See, e.g.*, CompTel reply at 20-22.

[566] *See, e.g.*, DoJ reply at 23-31; CompTel reply at 13-22. For a discussion of the argument that allowing new entrants to purchase vertical features as unbundled elements would nullify section 251(c)(4), *see infra*, Section V.H.

[567] Ohio Commission comments at 33; Oregon Commission comments at 27.

[568] 47 U.S.C. § 251(c)(3).

[569] NPRM at para. 86.

2. Comments

266. A number of parties agree with our interpretation that the phrase "access to network elements on an unbundled basis" means that incumbent LECs must provide access to the functionality of different elements on a separate basis, and must charge separate fees.[570] In contrast, PacTel argues that the 1996 Act does not require the provision of an element's functionality, but merely requires incumbent LECs to provide elements in a way that allows carriers to combine them and offer a telecommunications service. PacTel nevertheless acknowledges that agreements will likely allow for the provision of an element's functionality.[571]

267. Bell Atlantic and USTA argue that "access" to unbundled elements can only be achieved by interconnecting, under the terms of section 251(c)(2), a requesting carrier's facilities to the facilities of the incumbent LEC at a particular point.[572]

3. Discussion

268. We conclude that we should adopt our proposed interpretation that the terms "access" to network elements "on an unbundled basis" mean that incumbent LECs must provide the facility or functionality of a particular element to requesting carriers, separate from the facility or functionality of other elements, for a separate fee. We further conclude that a telecommunications carrier purchasing access to an unbundled network facility is entitled to exclusive use of that facility for a period of time, or when purchasing access to a feature, function, or capability of a facility, a telecommunications carrier is entitled to use of that feature, function, or capability for a period of time. The specified period may vary depending on the terms of the agreement between the incumbent LEC and the requesting carrier. The ability of other carriers to obtain access to a network element for some period of time does not relieve the incumbent LEC of the duty to maintain, repair, or replace the unbundled network element.[573] We reject PacTel's interpretation of the terms quoted above

[570] BellSouth comments at 34; MFS comments at 41; Cable & Wireless comments at 26-27; MCI comments at 12-20; Ericsson comments at 4; District of Columbia Commission comments at 22; Nextel comments at 8; USTA comments at 26; Colorado Commission comments at 27; Pennsylvania Commission comments at 24-25; GTE comments at 27; Florida Commission comments at 19; GST comments at 19.

[571] PacTel comments at 44-47.

[572] Bell Atlantic comments at 13; USTA comments at 62-63; *see also* GTE comments at 74-79; Letter from Antoinette Cook Bush, Counsel for Ameritech, to William F. Caton, Secretary, FCC, July 10, 1996; *cf.* DoJ comments at 45 (the requirement in section 251(c)(2) that carriers must offer either local exchange or exchange access services does not apply to the carriers offering services using unbundled elements).

[573] We clarify that title to unbundled network elements will not shift to requesting carriers.

because it is inconsistent with our definition of the term network element (*i.e.*, an element includes all features and functions embedded in it). Moreover, to the extent that PacTel's argument suggests that the 1996 Act does not require unbundled elements to be provisioned in a way that would make them useful, we find that its statutory interpretation is inconsistent with the statute's goal of providing new entrants with realistic means of competing against incumbents.

269. We further conclude that "access" to an unbundled element refers to the means by which requesting carriers obtain an element's functionality in order to provide a telecommunications service. Just as section 251(c)(2) requires "interconnection . . . at any technically feasible point," section 251(c)(3) requires "access . . . at any technically feasible point."[574] We conclude, based on the terms of sections 251(c)(2), 251(c)(3), and 251(c)(6), that an incumbent LEC's duty to provide "access" constitutes a duty to provide a connection to a network element independent of any duty imposed by subsection (c)(2). Thus, such "access" must be provided under the rates, terms, and conditions that apply to unbundled elements.

270. Specifically, section 251(c)(6) provides that incumbent LECs must provide "physical collocation of equipment necessary for interconnection *or* access to unbundled network elements."[575] The use of the term "or" in this phrase means that interconnection is different from "access" to unbundled elements. The text of sections 251(c)(2) and (c)(3) leads to the same conclusion. Section 251(c)(2) requires that interconnection be provided for "the transmission and routing of telephone exchange service and exchange access."[576] Section 251(c)(3), in contrast, requires the provision of access to unbundled elements to allow requesting carriers to provide "a telecommunications service."[577] The term "telecommunications service" by definition includes a broader range of services than the terms "telephone exchange service and exchange access."[578] Subsection (c)(3), therefore, allows unbundled elements to be used for a broader range of services than subsection (c)(2) allows for interconnection. If we were to conclude that "access" to unbundled elements under subsection (c)(3) could only be achieved by means of interconnection under subsection (c)(2),

[574] 47 U.S.C. §§ 251(c)(2), 251(c)(3).

[575] 47 U.S.C. § 251(c)(6) (emphasis added).

[576] 47 U.S.C. § 251(c)(2).

[577] 47 U.S.C. § 251(c)(3).

[578] *See* 47 U.S.C. § 153(16),(46),(47).

we would be limiting, in effect, the uses to which unbundled elements may be put, contrary to the plain language of section 251(c)(3) and standard canons of statutory construction.[579]

E. Standards Necessary to Identify Unbundled Network Elements

1. Background

271. In the NPRM, we raised a number of issues concerning the meaning of technical feasibility in connection with unbundled elements.[580] We also sought comment on the extent to which the Commission should consider the standards set forth in section 251(d)(2) in identifying required unbundled elements, and on how we ought to interpret these standards.[581] Subsection (d)(2) provides that "(i)n determining what network elements should be made available for purposes of subsection (c)(3), the Commission shall consider, at a minimum" the following two standards, "whether (A) access to such network elements as are proprietary in nature is necessary; and (B) the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[582] We further asked about the relationship between the latter standard and the requirement in section 251(c)(3) that carriers be able to use unbundled elements to provide a telecommunications service.[583]

2. Comments

272. Commenters raised two issues in interpreting the standard relating to whether access to proprietary elements is necessary. The first issue relates to whether incumbent LECs are required to provide proprietary information contained in network elements (*e.g.*, Customer Premises Network Information contained in databases); and the second to whether incumbent LECs are required to provide network elements which are proprietary (*e.g.*, elements with proprietary protocols.) As to the first issue, Ameritech, SBC, BellSouth, PacTel, Texas Statewide Telephone Cooperative, Inc. and the Wyoming Commission argue that the Commission should protect proprietary information contained in incumbent LECs' networks.[584] BellSouth and PacTel further argue that we should prohibit access to elements containing proprietary information unless new entrants meet a heavy burden demonstrating need.[585]

273. As to the second issue, a few incumbent LECs argue generally that the Commission should require unbundling of proprietary network elements only under certain limited circumstances.[586] USTA argues that, if we do not grant incumbent LECs the ability to deny their competitors access to proprietary elements, we will stifle the incumbents' incentives to provide innovative services and thereby inhibit competition.[587] PacTel contends that we should not require unbundling of elements with proprietary protocols unless a new entrant demonstrates a heavy burden of need.[588] Ameritech and GTE assert that we should require unbundling of proprietary elements only when the failure to do so would prevent a carrier from offering a service.[589] GTE adds that, if an element is available from other sources, unbundling should not be mandated. Moreover, according to GTE, if incumbent LECs do make proprietary elements available, they should be compensated for the use of their intellectual property.[590] In contrast, the Consumer Federation of America asserts that, if we define proprietary elements broadly and require new entrants to demonstrate need before they may obtain them, we would significantly inhibit new entry.[591]

274. Most BOCs and GTE contend that the general obligation imposed by section 251(c)(3) is limited by section 251(d)(2)'s standard of whether the failure to provide access to network elements would impair the ability of carriers to offer a service. They argue that this standard requires incumbent LECs to provide unbundled elements only where the failure to do

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[579] *See, e.g.*, DoJ comments at 35-47.

[580] NPRM at paras. 87-88. *See supra*, Section IV.D, for a discussion of these issues.

[581] NPRM at para. 88.

[582] 47 U.S.C. § 251(d)(2).

[583] NPRM at para. 90.

[584] Ameritech comments at 34; SBC comments at 36-37; Texas Statewide Telephone Cooperative, Inc. comments at 5-6; BellSouth comments at 35; PacTel comments at 40-44; Wyoming Commission at 24-26.

[585] BellSouth comments at 35; PacTel comments at 40-44.

[586] Ameritech comments at 34-35, reply at 11; BellSouth comments at 35; PacTel comments at 40-44; GTE comments at 30-31; GTE reply at 16; *see also* USTA comments at 27-28.

[587] USTA comments at 27-28.

[588] PacTel comments at 40-44, reply at 16-17; *see also* BellSouth comments at 35.

[589] Ameritech comments at 34-35; Ameritech reply at 11; GTE comments at 30-31; GTE reply at 16.

[590] GTE comments at 30-31.

[591] CFA/CU reply at 25; *see also* Letter from Bruce K. Cox, Government Affairs Director, AT&T to William F. Caton, Secretary, FCC, July 11, 1996 (AT&T July 11 *Ex Parte*).

so would prohibit a carrier from providing a service.[592] Commenters offer two different standards by which we may determine whether a carrier may require an incumbent LEC to provide an unbundled element in order for the carrier to offer a service. First, GTE, PacTel and BellSouth argue that unbundling is not required if a carrier can obtain, or provide itself, the requested element on reasonable terms and conditions.[593] The burden of meeting this standard, according to GTE, falls on the requesting carrier.[594] If a carrier fails to meet this standard, but continues to request an element, BellSouth claims, that carrier must meet a heavier burden.[595] Second, PacTel and Ameritech argue that, if a carrier can offer a service by purchasing the underlying service from the incumbent LEC and reselling it, pursuant to section 251(c)(4), the carrier is not impaired in its ability to offer the service. Thus, they argue, new entrants cannot use unbundled elements exclusively to offer the same services that new entrants can obtain from an incumbent LEC under the resale provision.[596]

275. The Department of Justice and Comptel reject the BOCs' argument that the general obligation imposed by section 251(c)(3) is limited by consideration of whether the failure to provide access to an element would impair a carrier's ability to offer a service. They argue that the term "impair" does not mean "prevent," and that we should interpret this standard to mean that a carrier's ability to provide a service is impaired if obtaining an element from a third party is more costly than obtaining that same element from the incumbent. They also dispute the incumbent LECs' argument that the "impair" language in this standard means that new entrants cannot exclusively use unbundled elements to provide the same or similar retail services that an incumbent offers. They argue that, if similarity is enough to prevent the use of unbundled elements, then section 251(c)(3) would be nullified. They further contend that, under the BOCs' theory, incumbents could prevent new entry through the use of unbundled elements by offering unbundled loops, switching, and other elements as retail services.[597] CompTel also argues that this standard refers back to the first standard in section 251(d)(2) and means that incumbents must provide proprietary elements

[592] BellSouth comments at 31-35; GTE comments at 30-31, GTE reply 16-17; Ameritech comments at 25-33; PacTel comments at 40-44, reply at 16-17; SBC comments at 36-37.

[593] GTE comments at 30-31; PacTel comments at 40-44, reply at 17 n.38; BellSouth comments at 35.

[594] GTE reply at 17.

[595] BellSouth comments at 35.

[596] BellSouth comments at 31-33; Ameritech comments at 25-31; *see infra,* Section V.H, for a further discussion of the relationship between sections 251(c)(3) and 251(c)(4).

[597] *See, e.g.,* DoJ comments at 48-51, reply at 23-31; CompTel reply at 13-22; *see also,* AT&T reply at 13-20.

only if the failure to do so would prevent a requesting carrier from offering a telecommunications service.[598]

276. AT&T argues that the plain language of section 251(c)(3) means that incumbent LECs must provide unbundled elements that new entrants request, and that the factors in section 251(d)(2) are minimum considerations and not threshold requirements.[599] BellSouth and SBC agree that the "at minimum" language in section 251(d)(2) means the Commission can consider other factors not enumerated in the statute in determining what elements incumbent LECs must offer to requesting carriers.[600] Similarly, several commenters suggest that, in determining which elements must be offered, we should consider a number of additional factors, including, for example, whether there is a demonstrable market demand for a particular element.[601]

3. Discussion

277. Sections 251(c)(3) and 251(d)(2) set forth standards the Commission must consider in identifying unbundled network elements that incumbent LECs must make available in connection with arbitrations before state commissions and BOC statements of generally available terms and conditions. These standards guide the unbundling requirements we issue today as well as any different or additional unbundling requirements we may issue in the future. Similarly, the states must follow our interpretation of these standards to the extent they impose additional unbundling requirements during arbitrations or subsequent rulemaking proceedings.

278. Section 251(c)(3) requires incumbent LECs to provide requesting carriers with "nondiscriminatory access to network elements on an unbundled basis at any technically feasible point."[602] We find that this clause imposes on an incumbent LEC the duty to provide all network elements for which it is technically feasible to provide access on an unbundled basis. Because section 251(d)(1) requires us to "establish regulations to implement the

[598] CompTel comments at 24-25; *see also* AT&T July 11 *Ex Parte*.

[599] *See* AT&T reply at 13-20.

[600] BellSouth comments at 17, 26; SBC comments at 18.

[601] *See, e.g.,* SBC comments at 25-37, 84-99; NYNEX comments at 61-64; Ameritech comments at 34; USTA comments at 23; *see also* Texas Public Utility Counsel comments at 9-11; CBT comments at 15; Nortel comments at 6; U S West comments at 45-47; ASCI comments at 32.

[602] 47 U.S.C. § 251(c)(3).

requirements of" section 251(c)(3), we conclude that we have authority to establish regulations that are coextensive with the duty section 251(c)(3) imposes on incumbent LECs.

279. Section 251(d)(2), however, sets forth standards that do not depend on technical feasibility. More specifically, section 251(d)(2) provides that, in identifying unbundled elements, the Commission shall "consider, at a minimum," whether access to proprietary elements is necessary (the "proprietary standard"), and whether requesting carriers' ability to provide services would be impaired if the desired elements were not provided by an incumbent LEC (the "impairment standard.") Thus, section 251(d)(2) gives us the authority to decline to require incumbent LECs to provide access to unbundled network elements at technically feasible points if, for example, we were to conclude that access to a particular proprietary element is not necessary. To give effect to both sections 251(c)(3) and 251(d)(2), we conclude that the proprietary and impairment standards in section 251(d)(2) grant us the authority to refrain from requiring incumbent LECs to provide all network elements for which it is technically feasible to provide access on an unbundled basis. The authority we derive from section 251(d)(2) is limited, however, by our interpretation of these standards, and this section, as set forth below.

280. We agree with BellSouth, SBC, and others that the plain import of the "at minimum" language in section 251(d)(2) requires us, in identifying unbundled network elements, to "consider" the standards enumerated there, as well as other standards we believe are consistent with the objectives of the 1996 Act. We conclude that the word "consider" means we must weigh the standards enumerated in section 251(d)(2) in evaluating whether to require the unbundling of a particular element.

281. We further conclude that, in evaluating whether to impose additional unbundling requirements during the arbitration process, states must apply our definition of technical feasibility, discussed above in section IV.D. A determination of technical feasibility would then create a presumption in favor of requiring an incumbent LEC to provide the element. If providing access to an unbundled element is technically feasible, a state must then consider the standards set forth in section 251(d)(2), as we interpret them below. Similarly, the Commission will apply this analysis where we must arbitrate specific unbundling issues, under section 252(e)(5), and in future rulemaking proceedings that may consider additional or possibly different unbundling requirements.

282. Section 251(d)(2)(A) requires the Commission and the states to consider whether access to proprietary elements is "necessary." "Necessary" means, in this context, that an element is a prerequisite for competition. We believe that, in some instances, it will be "necessary" for new entrants to obtain access to proprietary elements (*e.g.*, elements with proprietary protocols or elements containing proprietary information), because without such

elements, their ability to compete would be significantly impaired or thwarted.[603] Thus, as an initial matter, we decline to adopt a general rule, as suggested by some incumbents, that would prohibit access to such elements, or make access available only upon a carrier demonstrating a heavy burden of need. We acknowledge that prohibiting incumbents from refusing access to proprietary elements could reduce their incentives to offer innovative services. We are not persuaded, however, that this is a sufficient reason to prohibit generally the unbundling of proprietary elements, because the threat to competition from any such prohibition would far exceed any costs to consumers resulting from reduced innovation by the incumbent LEC.[604] Moreover, the procompetitive effects of our conclusion generally will stimulate innovation in the market, offsetting any hypothetical reduction in innovation by the incumbent LECs.

283. We further conclude that, to the extent new entrants seek additional elements beyond those we identify herein, section 251(d)(2)(A) allows the Commission and the states to require the unbundling of such elements unless the incumbent can prove to a state commission that: (1) the element is proprietary, or contains proprietary information that will be revealed if the element is provided on an unbundled basis; and (2) a new entrant could offer the same proposed telecommunications service through the use of other, nonproprietary unbundled elements within the incumbent's network. We believe this interpretation of section 251(d)(2)(A) will best advance the procompetitive purposes of the 1996 Act. It allows new entrants to obtain proprietary elements from incumbent LECs where they are necessary to offer a telecommunications service, and, at the same time, it gives incumbents the opportunity to argue, before the states or the Commission, against unbundling proprietary elements where a new entrant could offer the same service using other unbundled elements in the incumbent's network. We decline to adopt the interpretation of section 251(d)(2)(A) advanced by some incumbents that incumbent LECs need not provide proprietary elements if requesting carriers can obtain the requested proprietary element from a source other than the incumbent. Requiring new entrants to duplicate unnecessarily even a part of the incumbent's network could generate delay and higher costs for new entrants, and thereby impede entry by competing local providers and delay competition, contrary to the goals of the 1996 Act.

284. We further conclude that, to the extent new entrants do not need access to all the proprietary information contained within an element in order to provide a telecommunications service, the Commission and the states may take action to protect the proprietary information.

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[603] As noted *supra*, Section V.E.2, a number of commenters argue that section 251(d)(2)(A) requires us to protect proprietary information, such as CPNI information, contained in network elements. We intend to treat issues regarding CPNI in our rulemaking proceeding on CPNI information. *Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information*, CC Docket No. 96-115, Notice of Proposed Rulemaking, FCC 96-221 (rel. May 17, 1996).

[604] In this proceeding, for example, we are requiring incumbent LECs to provide the local switching element which includes vertical features that some carriers contend are proprietary. *See infra*, Section V.J.

For example, to provide a telecommunications service, a new entrant might need access to information about a particular customer that is in an incumbent LEC database. The database to which the new entrant requires access, however, may contain proprietary information about all of the incumbent LECs' customers. In this circumstance, the new entrant should not have access to proprietary information about the incumbent LEC's other customers where it is not necessary to provide service to the new entrant's particular customer. Accordingly, we believe the Commission and the states have the authority to protect the confidentiality of proprietary information in an unbundled network element, such as a database, where that information is not necessary to enable a new entrant to offer a telecommunications service to its particular customer.

285. Section 251(d)(2)(B) requires us to consider whether the failure to provide access to an element would "impair" the ability of a new entrant to provide a service it seeks to offer. The term "impair" means "to make or cause to become worse; diminish in value."[605] We believe, generally, that an entrant's ability to offer a telecommunications service is "diminished in value" if the quality of the service the entrant can offer, absent access to the requested element, declines and/or the cost of providing the service rises. We believe we must consider this standard by evaluating whether a carrier could offer a service using other unbundled elements within an incumbent LEC's network. Accordingly, we interpret the "impairment" standard as requiring the Commission and the states, when evaluating unbundling requirements beyond those identified in our minimum list, to consider whether the failure of an incumbent to provide access to a network element would decrease the quality, or increase the financial or administrative cost of the service a requesting carrier seeks to offer, compared with providing that service over other unbundled elements in the incumbent LEC's network.

286. We decline to adopt the interpretation of the "impairment" standard advanced by most BOCs and GTE. Under their interpretation, incumbent LECs must provide unbundled elements only when the failure to do so would prevent a carrier from offering a service. We also reject the related interpretations that carriers are not impaired in their ability to provide a service if they can obtain elements from another source, or if they can provide the proposed service by purchasing the service at wholesale rates from a LEC. In general, and as discussed above, section 251(c)(3) imposes on incumbent LECs the obligation to offer on an unbundled basis all network elements for which it is technically feasible to provide access. We believe the plain language of section 251(d)(2), and the standards articulated there, give us the discretion to limit the general obligation imposed by subsection 251(c)(3), but they do not require us to do so. The standards set forth in section 251(d)(2) are minimum considerations that the Commission shall take into account in evaluating unbundling requirements. Accordingly, we conclude that the statute does not require us to interpret the "impairment"

[605] *See* Random House College Dictionary 665 (rev. ed. 1984).

standard in a way that would significantly diminish the obligation imposed by section 251(c)(3).

287. The interpretation advanced by most of the BOCs and GTE, described above, means that, if a requesting carrier could obtain an element from a source other than the incumbent, then the incumbent need not provide the element. We agree with the reasoning advanced by some of the commenters that this interpretation would nullify section 251(c)(3) because, in theory, any new entrant could provide all of the elements in the incumbents' networks. Congress made it possible for competitors to enter local markets through the purchase of unbundled elements because it recognized that duplication of an incumbent's network could delay entry, and could be inefficient and unnecessary.[606] The interpretation proffered by the BOCs and GTE would inhibit new entry and thus restrict the potential for meaningful competition, which would undermine the procompetitive goals of the 1996 Act. As a practical matter, if it is more efficient and less costly for new entrants to obtain network elements from a source other than an incumbent LEC, new entrants will likely pursue the more efficient and less costly approach. Additionally, as discussed above at section IV.C, we believe that allowing incumbent LECs to deny access to unbundled elements on the grounds that an element is equivalent to a service available at resale would lead to impractical results, because incumbents could completely avoid section 251(c)(3)'s unbundling obligations by offering unbundled elements to end users as retail services.[607]

288. Finally, we decline at this time to adopt any of the additional criteria proposed by commenters. We conclude that none of the additional factors suggested by commenters enhances our ability to identify unbundled network elements consistent with the procompetitive goals of the 1996 Act.[608] These additional considerations would limit unbundling requirements or make it administratively more difficult for new entrants to obtain additional unbundled elements beyond those identified in our minimum list of required elements. For example, we believe that the proposal that new entrants must provide detailed estimates regarding projected market demand is not necessary for incumbent LECs to efficiently plan for network growth.

[606] *See* LDDS comments at 37, reply at 14-15.

[607] *See infra*, Section V.H, for a further discussion on the relationship between sections 251(c)(3) and 251(c)(4).

[608] *See, e.g.*, Texas Public Utility Counsel comments at 9-11; Cincinnati Bell comments at 15; Nortel comments at 6 (the diversion of research and development efforts to facilities that new entrants do not really want will stifle innovation); SBC comments at 25-37, 84-99.

F. Provision of a Telecommunications Service Using Unbundled Network Elements

1. Background

289. Section 251(c)(3) provides that an incumbent LEC must provide access to "unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide" a telecommunications service.[609] In the NPRM, we sought comment on the meaning of this requirement.

2. Comments

290. The Illinois Commission and Texas Public Utility Counsel, as well as a number of potential local competitors, argue that incumbent LECs cannot limit the nature of requests for required elements, restrict the sale of those elements or the manner in which carriers use them,[610] impose requirements on the use of unbundled elements, or require the purchase of elements that carriers do not need.[611] The Texas Public Utility Counsel contends that carriers may combine unbundled elements with any technically-compatible equipment.[612] AT&T argues that incumbent LECs should be prohibited from separating elements that are ordered in combination, or from varying the definition of an unbundled element based on the services a carrier seeks to offer (absent the consent of the requesting carrier). AT&T and Comptel also argue that, in order to enable new entrants to offer competing services, incumbent LECs must perform the functions necessary to combine elements, and they must do so in any technically feasible manner requested by a new entrant.[613] According to Comptel, incumbent LECs must provide the operational and back office systems necessary for requesting carriers to purchase and combine network elements, otherwise the new entrants' ability to compete will be

[609] 47 U.S.C. § 251(c)(3).

[610] Illinois Commission comments at 36-38; CompTel reply at 21; Cable & Wireless reply at 20; LDDS comments at 40 (the statute grants carriers the right to use unbundled elements to offer any telecommunications service); *accord* GCI reply at 11.

[611] LDDS comments at 40; AT&T comments at 27; Cable & Wireless reply at 20; Texas Public Utility Counsel comments at 8-9; *see also* NCTA comments at 40-41 (new entrants must have access to elements that are necessary to provide a telecommunications service).

[612] Texas Public Utility Counsel comments at 8-9.

[613] AT&T comments at 27; CompTel reply at 23-24; *see also* MCI comments at 23.

impaired.[614] Sprint contends that this provision requires incumbents to offer different facilities and services in connection with a particular element, depending on the service a requesting carrier seeks to offer.[615] The Florida Commission argues, however, that, if a new entrant needs a particular variation of an element to offer a service, that element should be treated as distinct. This means, for example, that, if a requesting carrier seeks a local loop with a specific kind of conditioning, that loop should be treated as a distinct element from loops with other kinds of conditioning.[616]

291. NYNEX contends that incumbent LECs are not obligated to connect unbundled elements either to each other or to new entrants' facilities, and that the text of section 251(c)(3) requires requesting carriers to do the combining.[617] BellSouth argues that section 251(c)(3) requires requesting carriers to identify network elements with sufficient specificity so that their characteristics and appropriate uses can be defined. BellSouth contends that section 251(c)(3) prohibits carriers from requesting elements to provide cable or information services.[618]

3. Discussion

292. Under section 251(c)(3), incumbent LECs must provide access to "unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide" a telecommunications service.[619] We agree with the Illinois Commission, the Texas Public Utility Counsel, and others that this language bars incumbent LECs from imposing limitations, restrictions, or requirements on requests for, or the sale or use of, unbundled elements that would impair the ability of requesting carriers to offer telecommunications services in the manner they intend. For example, incumbent LECs may not restrict the types of telecommunications services requesting carriers may offer through unbundled elements, nor may they restrict requesting carriers from combining elements with

[614] CompTel comments at 38. Back office systems include the administrative means by which incumbent LECs commercially provision telecommunications services to consumers. Thus, they include the means by which incumbent LECs accept orders for services, respond to requests for repairs, etc.

[615] Sprint comments at 30.

[616] Florida Commission comments at 22.

[617] NYNEX reply at 19.

[618] BellSouth comments at 36; *see also* PacTel reply at 16-17.

[619] 47 U.S.C. § 251(c)(3).

any technically compatible equipment the requesting carriers own. We also conclude that section 251(c)(3) requires incumbent LECs to provide requesting carriers with all of the functionalities of a particular element, so that requesting carriers can provide any telecommunications services that can be offered by means of the element. We believe this interpretation provides new entrants with the requisite ability to use unbundled elements flexibly to respond to market forces, and thus is consistent with the procompetitive goals of the 1996 Act.

293. We agree with AT&T and Comptel that the quoted text in section 251(c)(3) bars incumbent LECs from separating elements that are ordered in combination, unless a requesting carrier specifically asks that such elements be separated. We also conclude that the quoted text requires incumbent LECs, if necessary, to perform the functions necessary to combine requested elements in any technically feasible manner either with other elements from the incumbent's network, or with elements possessed by new entrants, subject to the technical feasibility restrictions discussed below. We adopt these conclusions for two reasons. First, in practice it would be impossible for new entrants that lack facilities and information about the incumbent's network to combine unbundled elements from the incumbents' network without the assistance of the incumbent. If we adopted NYNEX's proposal, we believe requesting carriers would be seriously and unfairly inhibited in their ability to use unbundled elements to enter local markets. We therefore reject NYNEX's contention that the statute requires requesting carriers, rather than incumbents, to combine elements. We do not believe it is possible that Congress, having created the opportunity to enter local telephone markets through the use of unbundled elements, intended to undermine that opportunity by imposing technical obligations on requesting carriers that they might not be able to readily meet.

294. Second, given the practical difficulties of requiring requesting carriers to combine elements that are part of the incumbent LEC's network, we conclude that section 251(c)(3) should be read to require incumbent LECs to combine elements requested by carriers. More specifically, section 251(c)(3) provides that incumbent LECs must provide unbundled elements "in a manner that allows requesting carriers to combine them" to provide a telecommunications service. We believe this phrase means that incumbents must provide unbundled elements in a way that *enables* requesting carriers to combine them to provide a service. The phrase "allows requesting carriers to combine them," does not impose the obligation of physically combining elements exclusively on requesting carriers. Rather, it permits a requesting carrier to combine the elements if the carrier is reasonably able to do so. If the carrier is unable to combine the elements, the incumbent must do so.[620]

[620] In this context, we conclude that the term "combine" means connecting two or more unbundled network elements in a manner that would allow a requesting carrier to offer the telecommunications service it seeks to offer.

295. Our conclusion that incumbent LECs must combine unbundled elements when so requested is consistent with the method we have adopted to identify unbundled network elements. Under our method, incumbents must provide, as a single, combined element, facilities that could comprise more than one element. This means, for example, that, if the states require incumbent LECs to provision subloop elements, incumbent LECs must still provision a local loop as a single, combined element when so requested, because we identify local loops as a single element in this proceeding.[621]

296. We decline to adopt the view proffered by some parties that incumbents must combine network elements in any technically feasible manner requested. This proposal necessarily means that carriers could request incumbent LECs to combine elements that are not ordinarily combined in the incumbent's network. We are concerned that, in some instances, this could potentially affect the reliability and security of the incumbent's network, and the ability of other carriers to obtain interconnection, or request and use unbundled elements. Accordingly, incumbent LECs are required to perform the functions necessary to combine those elements that are ordinarily combined within their network, in the manner in which they are typically combined. Incumbent LECs are also required to perform the functions necessary to combine elements, even if they are not ordinarily combined in that manner, or they are not ordinarily combined in the incumbent's network, provided that such combination is technically feasible,[622] and such combination would not undermine the ability of other carriers to access unbundled elements or interconnect with the incumbent LEC's network. Incumbent LECs must prove to state commissions that a request to combine particular elements in a particular manner is not technically feasible, or that the request would undermine the ability of other carriers to access unbundled elements and interconnect because they have the information to support such a claim.

297. We agree with Sprint and the Florida Commission, respectively, that in some cases incumbent LECs may be required to provision a particular element in different ways, depending on the service a requesting carrier seeks to offer; and, in other instances, where a new entrant needs a particular variant of an element to offer a service, that element should be treated as distinct from other variants of the element. This means, for example, that we will treat local loops with a particular type of conditioning[623] as distinct elements that are different

[621] *See infra*, Section V.J.

[622] As discussed in Section IV, effects on network reliability and security are factors to be considered in determining technical feasibility.

[623] For an explanation of what conditioning of a local loop means *see infra*, Section V.J.1.

from loops with other types of conditioning.[624] As discussed below, we agree with CompTel that incumbent LECs must provide the operational and support systems necessary for requesting carriers to purchase and combine network elements. Incumbent LECs use these systems to provide services to their own end users, and new entrants similarly must have access to them to provide telecommunications services using unbundled elements.[625] Finally, we agree with BellSouth that requesting carriers must specify to incumbent LECs the network elements they seek before they can obtain such elements on an unbundled basis. We do not believe, however, that it will always be possible for new entrants to do this either before negotiations (or arbitrations) begin, or before they end, because new entrants will likely lack knowledge about the facilities and capabilities of a particular incumbent LEC's network. We further believe that incumbent LECs must work with new entrants to identify the elements the new entrants will need to offer a particular service in the manner the new entrants intend.

G. Nondiscriminatory Access to Unbundled Network Elements and Just, Reasonable and Nondiscriminatory Terms and Conditions for the Provision of Unbundled Network Elements

1. Background

298. Section 251(c)(3) requires incumbent LECs to provide requesting carriers "nondiscriminatory access to network elements on an unbundled basis . . . on rates, terms, and conditions that are just, reasonable, and nondiscriminatory."[626] In the NPRM, we sought comment on whether we should adopt minimum national requirements governing the terms and conditions for the provision of unbundled network elements. We further asked what rules could ensure that the terms and conditions for access to unbundled network elements are just, reasonable and nondiscriminatory, and how we should enforce such rules. In particular, we sought comment on whether we should adopt uniform national rules governing provisioning, service, maintenance, technical standards and nondiscrimination safeguards in connection with the provision of unbundled network elements. We also asked whether we should consider any of the terms and conditions applicable to the provision of access to unbundled elements in evaluating BOC applications to provide in-region interLATA services under section 271(b).[627]

2. Comments

[624] Florida Commission comments at 22.

[625] Incumbent LEC back-office systems are discussed in Section V.J.

[626] 47 U.S.C. § 251(c)(3).

[627] NPRM at paras. 79, 89.

299. The Florida, Illinois and Washington Commissions, as well as a number of potential competitors, argue that we should adopt national standards governing the terms and conditions for the provision of unbundled elements to ensure that new entrants obtain nondiscriminatory access to elements. These parties contend that incumbent LECs have the incentive and ability to delay the provisioning of unbundled elements, to provide lower quality services to new entrants, and engage in other anticompetitive tactics. They further argue that it would be a tremendous barrier to entry if new entrants had to negotiate the terms and conditions for the provision of unbundled elements on a state by state basis, especially in light of the incumbent LECs' superior bargaining power. Accordingly, they argue that we should establish requirements mandating nondiscriminatory performance for ordering, installation, provisioning, maintenance, repair and billing.[628] Cable & Wireless argues that access to unbundled network elements on a nondiscriminatory basis will assist small carriers in entering local exchange markets because small carriers cannot afford the capital necessary to build competing infrastructure.[629]

300. The parties arguing for national standards governing the terms and conditions for the provision of unbundled elements disagree, however, on the types of requirements we should establish. Teleport and Intermedia Communications argue that incumbent LECs should be required to provide installation, service and maintenance for new entrants pursuant to the same standards they do for themselves.[630] NCTA, MCI, and Cable & Wireless argue that we should adopt specific standards, including time limits, for implementation of requests for unbundled elements.[631] MCI, AT&T, Frontier and the Washington and Texas Commissions further argue that incumbents should be required to provide access to unbundled elements that

[628] MFS comments at 16-17, 41; AT&T comments at 33-39; AT&T reply at 21-22; TCC comments at 54-60; Cable & Wireless comments at 36-37; MCI comments at 20-27; Ericsson comments at 3; Continental comments at 19; Comcast comments at 24-25; Intermedia comments at 3-13; Florida Commission comments at 21; Illinois Commission comments at 40; Washington Commission comments at 21-22; Sprint comments at 17-19; GST comments at 17; Teleport reply at 26-29; Nextel comments at 9-10; NCTA comments at 44-46; Colorado Commission comments at 27 (some general terms and conditions would be useful); Texas Commission comments at 15-16.

[629] Cable & Wireless comments at 23; *see also* SBA comments at 14-15 (the Commission should establish terms and conditions for the provision of unbundled elements, for otherwise, the provision of unbundled elements to smaller competitors would be rendered useless).

[630] Teleport comments at 25, 33-34, reply at 26-29; Intermedia comments at 3-13.

[631] NCTA comments at 44-46; MCI comments at 24-30; Cable & Wireless comments at 36-37; *see also* Intermedia comments at 3-6.

is equal in quality to what the incumbents provide themselves.[632] PageNet argues that the "equal-in-quality" standard does not mean that treatment should be identical where different technology is used, but that the quality should be the same.[633] Time Warner and Continental argue that we should subject incumbents to reasonable provisioning standards.[634] The District of Columbia Commission argues that we should adopt a general rule that the incumbent must offer the same services under the same terms and conditions to all similarly situated customers.[635] Finally, Lincoln Tel. argues that the Commission should adopt the terms and conditions established in our Expanded Interconnection and Open Network Architecture proceedings.[636]

301. A number of incumbents, including Bell Atlantic, SBC, GVNW and NYNEX, contend that we should not set specific rules, including time limits, for installation, service, maintenance and repair because incumbent LECs have different operational and administrative systems, and are subject to different state standards.[637] GVNW further notes that specific intervals would impose an uneconomic burden on rural LECs because it would force them to purchase excess capacity in advance.[638] The Washington and Florida Commissions, as well as SBC, GVNW, NYNEX, and AT&T, argue that we should adopt a general nondiscrimination standard and require incumbent LECs to provide network elements to new entrants according to the same installation, service, and maintenance intervals that apply to LEC customers and services. The Florida Commission observes that state requirements vary by state, and therefore states are in the best position to evaluate disputes relating to installation, service and

[632] MCI comments at 23; AT&T comments at 33-39 (the Commission has imposed similar requirements in other instances where the BOCs provide competitive services that rely on monopoly inputs controlled by the BOCs); Texas Commission comments at 15-16; Washington Commission comments at 21; Frontier comments at 18; *accord* MFS comments at 17, 41; *see also* ACSI comments at 51; Ohio commission comments at 31.

[633] PageNet comments at 6-9.

[634] Time Warner comments at 44-45; Continental comments at 20.

[635] District of Columbia Commission comments at 19-22.

[636] Lincoln Tel. comments at 9.

[637] Bell Atlantic comments at 31; SBC comments at 37-38; GVNW comments at 17; NYNEX reply at 32-33; *see also* Colorado Commission comments at 24-27 (certain technical standards may not be economically reasonable in all areas because of differences in technology, demography and geography).

[638] GVNW comments at 17.

maintenance intervals.[639] NYNEX explains that implementation of such a general standard will vary based on technology, service offering, and geographic area, and therefore states and negotiating parties are in the best position to determine specific implementation responsibilities.[640] TCC argues that we should adopt a general standard prohibiting incumbents from favoring their own retail operations and that consumers should not be able to perceive a difference between services provided by incumbents and those provided by new entrants.[641] Bell Atlantic contends that, while we should adopt a general nondiscrimination standard, this standard should not incorporate the standards that apply to LEC customers and services because many unbundled elements are new services with which incumbent LECs have no experience.[642] The Pennsylvania Commission argues that the terms and conditions adopted herein should accommodate local variations.[643]

302. A number of potential competitors argue that, to achieve nondiscriminatory provision of unbundled elements, incumbent LECs must be required to provide pre-ordering, ordering, provisioning, billing, and maintenance and repair, and other services on a "real time" basis, which can only be done through the use of electronic ordering interfaces.[644] CompTel argues that incumbents provide these types of services to themselves by automated means and therefore they should be available to competing providers through automation.[645] AT&T contends that manual interfaces for the provision of unbundled elements would cause overwhelming delays that would inhibit the ability of new entrants to compete.[646] AT&T further argues that we should establish national standards for gateways that would interface with incumbent LEC electronic ordering systems. According to AT&T, the Commission

[639] Washington Commission comments at 21-22; Florida Commission comments at 21; SBC comments at 37-38; AT&T comments at 33-39; AT&T reply at 21-22; NYNEX reply at 32-33; *accord* TCC comments at 54-60; Intermedia comments at 3-13.

[640] NYNEX reply at 32-33.

[641] TCC comments at 54-60.

[642] Bell Atlantic comments at 31.

[643] Pennsylvania Commission comments at 25.

[644] Sprint comments at 17-22; Teleport reply at 26-29; AT&T comments at 33-39; AT&T reply at 21-22; TCC comments at 54-60; MCI comments at 23. *See infra*, Section V.J.5, summarizing the Electronic Communications Implementation Committee's definition of an electronic interface.

[645] CompTel reply at 23-24.

[646] AT&T comments at 33-39, reply at 21-22.

should oversee the development of such gateways and incumbent LECs should be required to provide electronic ordering systems with the same level of quality that they provide in such systems for themselves.[647] AT&T, MCI, and Sprint argue that we should establish deadlines for the development of electronic interface systems, and a deadline for implementation of such systems.[648] TCC argues that incumbents should not delay provision of unbundled elements until automated interfaces are developed.[649] Lincoln Tel. contends, however, that we should not require small and medium size incumbent LECs to provide electronic ordering interfaces.[650]

303. Some potential competitors argue that we should impose additional terms and conditions for the provision of unbundled elements, including all test and turn-up procedures, nondiscriminatory access to incumbent LEC databases, around-the-clock provisioning support, and processes that would make it as easy and transparent for a customer to switch local carriers as it currently is to switch long distance carriers. These parties argue that we should require incumbents to continue to participate in cooperative industry practices, such as the Centralized Message Distribution System, and that new entrants should have access to such systems.[651] Sprint and NCTA contend that, because incumbent LECs can obtain access to a new entrant's CPNI, through access to signaling and databases, we should prohibit incumbent LECs from using a new entrant's proprietary information for marketing purposes.[652] MFS argues that we should set minimum technical standards in connection with the provision of unbundled elements, and thus we should require incumbent LECs to offer new entrants any type of loop facilities (*e.g.*, loop upgrades and conditioning) and transmission capabilities available within its network.[653] MCI contends we should adopt national technical standards in connection with the means to combine elements and access to information and that such technical standards should meet Bellcore and ANSI requirements. MCI further contends that,

[647] AT&T comments at 33-39; *accord* TCC comments at 54-60.

[648] AT&T comments at 33-39; Sprint comments at 17-22 (the Commission should direct the industry to develop standards for electronic bonding within 12 months, and should require incumbents to implement these standards within 12 months); MCI comments at 20-27; MCI reply at 28-30.

[649] TCC comments at 54-60.

[650] Lincoln Tel. comments at 9.

[651] *See, e.g.*, MCI comments at 23; AT&T comments at 33-39; Continental comments at 23.

[652] Sprint comments at 17-22; NCTA comments at 43.

[653] MFS reply at 18-19.

to overcome incumbent LEC incentives to engage in dilatory tactics, the Commission should require incumbent LECs to implement the terms and conditions for the provision of unbundled elements within six months after the end of negotiations or arbitrations. MCI contends that this requirement will hasten the development of the technical standards and operational support systems that are necessary to provide unbundled elements in a nondiscriminatory manner.[654] AT&T argues that the terms and conditions for pre-ordering, ordering, provisioning, billing, and maintenance and repair should be the same under sections 251(c)(3) and 251(c)(4).[655]

304. PacTel and USTA argue that we should not establish national standards for installation, service, and maintenance and repair in connection with the provision of unbundled elements. PacTel contends that we should merely establish guidelines. USTA argues that the 1996 Act does not authorize the Commission to establish such standards, and the advantages of rules for the provision of unbundled elements are more than offset by the impingement on voluntary negotiations.[656] USTA and the California Commission further argue that we should not adopt technical standards to insure interoperability between networks because this function is performed by standards bodies, and the differences in operational and administrative systems between LEC networks result in different provisioning and service intervals. They further argue that any requirements on technical standards would hinder efficiency.[657] PacTel argues that there is very little opportunity for discrimination against competing providers because few elements are dedicated to specific new entrants. PacTel further contends that we should not establish rules to insure nondiscriminatory provision of network elements because such rules will encourage litigation and the 1996 Act is self-effectuating. PacTel argues that we should consider claims of discrimination on a case-by-case basis through adjudication of complaints.[658] Both PacTel and USTA argue that the terms and conditions for the provision of unbundled elements should be resolved by private parties,

[654] MCI comments at 20-27; MCI reply at 28-30.

[655] AT&T comments at 33-39.

[656] PacTel comments at 40-44; USTA comments at 21-22; *see also* GTE comments at 24.

[657] USTA comments at 21-22; California Commission comments at 26-28; *see also* Colorado Commission comments at 27 (national technical standards are a laudable goal but should be carefully considered because of differences between incumbent LEC networks); Oregon commission comments at 24.

[658] PacTel comments at 30, 50-52; *accord* GVNW comments at 23-24 (requiring incumbent LECs to provide equivalent service is a negative incentives approach; the FCC will achieve nondiscriminatory provision of unbundled elements if it insures that incumbents are adequately compensated for such services).

the states, and industry fora.[659] The California Commission argues that the states are best situated to determine the terms and conditions for the provision of unbundled elements because they can best accommodate unique circumstances. The California Commission also argues that the Commission can determine whether the terms and conditions for the provision of unbundled elements are appropriate when the Commission evaluates BOC section 271 applications.[660]

305. Teleport argues that we must impose some method of enforcing terms and conditions applicable to unbundled elements, otherwise such regulations will not achieve their desired effect.[661] Thus, Teleport and a number of other potential competitors argue that we should impose penalties on incumbent LECs who fail to meet our standards.[662] MFS and NCTA argue that new entrants should be entitled to damages, and NCTA further contends that new entrants should be entitled to a reduction in rates for violations of our rules.[663] AT&T and Intermedia Communications argue that incumbents should be required to file reports demonstrating compliance with the terms and conditions established herein.[664] AT&T and others specifically request that the Commission require each incumbent LEC to file quarterly reports identifying the time intervals under which the incumbents have performed ordering, provisioning, and maintenance functions for competitors and for the incumbents' end-user customers.[665] MCI and Cable & Wireless argue that we should maintain oversight of the process by which incumbent LECs implement requests for unbundled elements.[666] PacTel opposes the imposition of penalties for failure to meet performance standards on the grounds that this will foster litigation and unwarranted claims of breach.[667]

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[659] PacTel comments at 30, 40-44; USTA comments at 21-22.

[660] California Commission comments at 26-28; *see also* Oregon commission comments at 27.

[661] Teleport reply at 26-29.

[662] Teleport comments at 25-34, reply at 26-29; MCI comments at 20, reply at 28-30; NCTA comments at 44-46; Comcast comments at 24-25; Continental comments at 20.

[663] MFS comments at 16-17, 41; NCTA comments at 45-46.

[664] AT&T comments at 33-39; Intermedia comments at 3-6.

[665] *See, e.g.*, AT&T comments at 38; GCI comments at 9; Intermedia comments at 4-5; ACTA comments at 15.

[666] MCI comments at 21-27; Cable & Wireless comments at 36-37.

[667] Pactel comments at 30.

306. A number of potential entrants argue that the Commission should condition BOC entry into the in-region long distance market on fulfillment of the terms and conditions for the provision of unbundled elements.[668] Teleport argues that once the BOCs get into the in-region long distance market they will have no incentive to provide competitors with nondiscriminatory access to unbundled network elements.[669] PacTel, however, argues that we should conclude that the checklist in section 271 is satisfied if an incumbent LEC is providing unbundled elements as required by the Commission and states, and we should not consider the terms and conditions for the provision of unbundled elements in evaluating section 271 applications.[670]

3. Discussion

307. We agree with those commenters, including the Florida, Illinois and Washington Commissions, that to achieve the procompetitive goals of the 1996 Act, it is necessary to establish rules that define the obligations of incumbent LECs to provide nondiscriminatory access to unbundled network elements, and to provide such elements on terms and conditions that are just, reasonable and nondiscriminatory.[671] As discussed above at sections II.A, II.B and V.B, we believe that incumbent LECs have little incentive to facilitate the ability of new entrants, including small entities, to compete against them and, thus, have little incentive to provision unbundled elements in a manner that would provide efficient competitors with a meaningful opportunity to compete. We are also cognizant of the fact that incumbent LECs have the incentive and the ability to engage in many kinds of discrimination. For example, incumbent LECs could potentially delay providing access to unbundled network elements, or they could provide them to new entrants at a degraded level of quality.

308. Consistent with arguments advanced by the Florida and Washington Commissions, incumbent LECs, and potential competitors, and as more fully discussed in the specific sections below, we adopt general, national rules defining "nondiscriminatory access" to unbundled network elements, and "just, reasonable, and nondiscriminatory" terms and conditions for the provision of such elements. We have chosen this approach, rather than

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[668] MCI comments at 21-27; Teleport comments at 25-34 (arguing that it is already experiencing service quality problems); Cable & Wireless comments at 36-37; TCC comments at 54-60; CompTel comments at 23-24; LDDS comments at 27.

[669] Teleport comments at 25-35.

[670] PacTel comments at 40-44.

[671] *See infra*, Section VII, for a discussion of just, reasonable and nondiscriminatory rates for unbundled network elements.

allowing states exclusively to consider these issues, because we believe that some national rules regarding nondiscriminatory access will reduce the costs of entry and speed the development of competition.[672]

309. We conclude, for example, that national rules defining the 1996 Act's requirements regarding nondiscriminatory access to, and provision of, unbundled elements will reduce costs associated with potential litigation over these issues, and will enable states to conduct arbitrations more quickly by reducing the number of issues they must consider. Such rules will also facilitate the ability of the Commission to conduct arbitrations, should we assume a state's responsibilities under section 252(e)(5). We conclude further that such rules will create some uniformity across states in connection with the terms under which new entrants may obtain access to network elements, thus facilitating the ability of potential competitors, including small entities, to enter local markets on a regional or national scale. Accordingly, for all of these reasons, we reject the arguments of PacTel and USTA that we should not adopt national rules relating to incumbent LEC obligations to provide access to, and provision, unbundled elements in a nondiscriminatory manner.

310. The record compiled in this proceeding supports the adoption of uniform general rules that rely on states to develop more specific requirements in arbitrations and other state proceedings. More significantly, however, we agree with the California and Florida Commissions that the states are best situated to issue specific rules because of their existing knowledge regarding incumbent LEC networks, capabilities, and performance standards in their separate jurisdictions and because of the role they will play in conducting mediations, arbitrations, and approving agreements. We expect that the states will implement the general nondiscrimination rules set forth herein by adopting, *inter alia*, specific rules determining the timing in which incumbent LECs must provision certain elements, and any other specific conditions they deem necessary to provide new entrants, including small competitors, with a meaningful opportunity to compete in local exchange markets. The states will continue to gain expertise in connection with issues relating to just, reasonable, and nondiscriminatory access and provision of unbundled network elements. We expect to turn to the states, and rely on the expertise they develop in this area, when we review and revise our rules as necessary.

311. We agree with those commenters that argue that incumbent LECs should be required to fulfill some type of reporting requirement to ensure that they provision unbundled elements in a nondiscriminatory manner. We believe the record is insufficient at this time to adopt such requirements, and we may reexamine this issue in the future. We encourage the

[672] *See supra*, Section V.B.

states, however, to adopt reporting requirements.[673] We decline to address whether the Commission should consider any of the terms and conditions adopted here in evaluating BOC applications to provide in-region long distance services. We will consider this issue, as it arises, when we evaluate individual BOC applications.

a. Nondiscriminatory Access to Unbundled Network Elements

312. We conclude that the obligation to provide "nondiscriminatory access to network elements on an unbundled basis"[674] refers to both the physical or logical connection to the element and the element itself. In considering how to implement this obligation in a manner that would achieve the 1996 Act's goal of promoting local exchange competition, we recognize that new entrants, including small entities, would be denied a meaningful opportunity to compete if the quality of the access to unbundled elements provided by incumbent LECs, as well as the quality of the elements themselves, were lower than what the incumbent LECs provide to themselves. Thus, we conclude it would be insufficient to define the obligation of incumbent LECs to provide "nondiscriminatory access" to mean that the quality of the access and unbundled elements incumbent LECs provide to all requesting carriers is the same. As discussed above with respect to interconnection,[675] an incumbent LEC could potentially act in a nondiscriminatory manner in providing access or elements to all requesting carriers, while providing preferential access or elements to itself. Accordingly, we conclude that the phrase "nondiscriminatory access" in section 251(c)(3) means at least two things: first, the quality of an unbundled network element that an incumbent LEC provides, as well as the access provided to that element, must be equal between all carriers requesting access to that element; second, where technically feasible, the access and unbundled network element provided by an incumbent LEC must be at least equal-in-quality to that which the incumbent LEC provides to itself.[676]

313. We believe that Congress set forth a "nondiscriminatory access" requirement in section 251(c)(3), rather then an absolute equal-in-quality requirement, such as that set forth in section 251(c)(2)(C), because, in rare circumstances, it may be technically infeasible for incumbent LECs to provide requesting carriers with unbundled elements, and access to such

[673] We address issues regarding enforcement of the rules we adopt in this Section, regarding nondiscriminatory access to, and just, reasonable and nondiscriminatory terms and conditions for the provision of unbundled network elements, at *supra*, in Section II.E.

[674] 47 U.S.C. § 251(c)(3).

[675] *See supra*, Sections IV.G, IV.H.

[676] We note that providing access or elements of lesser quality than that enjoyed by the incumbent LEC would also constitute an "unjust" or "unreasonable" term or condition.

elements, that are equal-in-quality to what the incumbent LECs provide themselves. According to some commenters, this problem arises in connection with one variant of one of the unbundled network elements we identify in this order. These commenters argue that a carrier purchasing access to a 1AESS local switch may not be able to receive, for example, the full measure of customized routing features that such a switch may afford the incumbent.[677] In the rare circumstances where it is technically infeasible for an incumbent LEC to provision access or elements that are equal-in-quality, we believe disparate access would not be inconsistent with the nondiscrimination requirement. Accordingly, we require incumbent LECs to provide access and unbundled elements that are at least equal-in-quality to what the incumbent LECs provide themselves, and allow for an exception to this requirement only where it is technically infeasible to meet.[678] We expect incumbent LECs to fulfill this requirement in nearly all instances where they provision unbundled elements because we believe the technical infeasibility problem will arise rarely. We further conclude, however, that the incumbent LEC must prove to a state commission that it is technically infeasible to provide access to unbundled elements, or the unbundled elements themselves, at the same level of quality that the incumbent LEC provides to itself.

314. Our conclusion that an incumbent LEC must provide unbundled elements, as well as access to them, that is "at least" equal in quality to that which the incumbent provides itself, does not excuse incumbent LECs from providing, when requested and where technically feasible, access or unbundled elements of higher quality.[679] As we discuss below,[680] we do not believe that this obligation is unduly burdensome to incumbent LECs because the 1996 Act requires a requesting carrier to pay the costs of unbundling, and thus incumbent LECs will be fully compensated for any efforts they make to increase the quality of access or elements within their own network.[681] Moreover, to the extent this obligation allows new entrants, including small entities, to offer services that are different from those offered by the

[677] *See infra*, Section V.J, discussing commenters' arguments regarding the possible technical limitations of such switches.

[678] The exception described here does not excuse incumbent LECs from the obligation to modify elements within their networks to allow requesting carriers to obtain access to such elements where this is technically feasible. *See supra*, Section IV.D.

[679] An incumbent LEC, in accommodating a carrier's request for a particular unbundled element, may ultimately provision an element that is higher in quality than what the incumbent provides to itself. *See infra*, Section V.J.1.

[680] *See infra*, Section V.J. We require, for example, that incumbent LECs provide local loops conditioned to enable the provision of digital services (where technically feasible) even if the incumbent does not itself provide such digital services.

[681] *See infra*, Section VII.

incumbent, we believe it is consistent with Congress's goal to promote local exchange competition. We note that, to the extent an incumbent LEC provides an element with a superior level of quality to a particular carrier, the incumbent LEC must provide all other requesting carriers with the same opportunity to obtain that element with the equivalent higher level of quality. We further note that where a requesting carrier specifically requests access or unbundled elements that are lower in quality to what the incumbent LECs provide themselves, incumbent LECs may offer such inferior quality if it is technically feasible. Finally, we conclude that the incumbent LEC must prove to a state commission that it is technically infeasible to provide access to unbundled elements, or the unbundled elements themselves, at a level of quality that is superior to or lower than what the incumbent LEC provides to itself.

b. Just, Reasonable and Nondiscriminatory Terms and Conditions for the Provision of Unbundled Network Elements

315. The duty to provide unbundled network elements on "terms, and conditions that are just, reasonable, and nondiscriminatory" means, at a minimum, that whatever those terms and conditions are, they must be offered equally to all requesting carriers, and where applicable, they must be equal to the terms and conditions under which the incumbent LEC provisions such elements to itself.[682] We also conclude that, because section 251(c)(3) includes the terms "just" and "reasonable," this duty encompasses more than the obligation to treat carriers equally. Interpreting these terms in light of the 1996 Act's goal of promoting local exchange competition, and the benefits inherent in such competition, we conclude that these terms require incumbent LECs to provide unbundled elements under terms and conditions that would provide an efficient competitor with a meaningful opportunity to compete. Such terms and conditions should serve to promote fair and efficient competition. This means, for example, that incumbent LECs may not provision unbundled elements that are inferior in quality to what the incumbent provides itself because this would likely deny an efficient competitor a meaningful opportunity to compete. We reach this conclusion because providing new entrants, including small entities, with a meaningful opportunity to compete is a necessary precondition to obtaining the benefits that the opening of local exchange markets to competition is designed to achieve.

316. As is more fully discussed below,[683] to enable new entrants, including small entities, to share the economies of scale, scope, and density within the incumbent LECs' networks, we conclude that incumbent LECs must provide carriers purchasing access to

[682] *See supras*, Sections IV.G, IV.H.

[683] *See infra*, Section V.J.

unbundled network elements with the pre-ordering, ordering, provisioning,[684] maintenance and repair, and billing functions of the incumbent LECs operations support systems. Moreover, the incumbent must provide access to these functions under the same terms and conditions that they provide these services to themselves or their customers. We discuss specific terms and conditions applicable to the unbundled elements identified in this order below, in Section V.J.

H. The Relationship Between Sections 251(c)(3) and 251(c)(4)

1. Background

317. Section 251(c)(4) provides that incumbent LECs must offer "for resale at wholesale rates any telecommunications service that the carrier provides at retail to subscribers that are not telecommunications carriers."[685] In the NPRM, we asked for comment on the relationship between this provision and section 251(c)(3). Specifically, we asked whether carriers can order and combine network elements to offer the same services that incumbent LECs offer for resale under section 251(c)(4). We observed that different pricing standards under section 252(d) apply to unbundled elements under section 251(c)(3) and resold services under section 251(c)(4), and that section 251(c)(3) contemplates the purchase of unseparated facilities (*i.e.*, facilities that can be used for either inter- or intrastate services) while subsection (c)(4) does not necessarily contemplate this. We asked for comment on the implications or significance of these differences.[686]

2. Comments

318. A number of commenters, including incumbent LECs and CAPs, argue that, in order to distinguish section 251(c)(4) from section 251(c)(3), the Commission must conclude that new entrants can only obtain access to unbundled elements if they own or possess some local exchange facilities that they plan to use in combination with unbundled elements to provide a local service.[687] According to NYNEX, the 1996 Act contemplates that new

[684] The term "provisioning" includes installation.

[685] 47 U.S.C. § 251(c)(4).

[686] NPRM at para. 85.

[687] MFS comments at 36-40, 65-66; BellSouth comments at 31-33; Teleport comments at 39-42; Bell Atlantic comments at 14, reply at 5-6; Ameritech comments at 25-31; USTA comments at 23-26, reply at 10; TDS comments at 15-16; PacTel comments at 40-45; GTE reply at 17-18; SBC reply at 11; *accord* Pennsylvania Commission comments at 24; NYNEX comments at 29-39 (the FCC should state that new entrants can obtain unbundled elements to provide a service that is sold at resale only if they can self-provide, at a minimum, one of the elements used to provide the service).

entrants will enter local telephone markets either through section 251(c)(3) or section 251(c)(4). The former is designed for entrants with some of their own facilities, and would allow them to supplement their networks; the latter is designed for new entrants that do not possess any facilities.[688] MFS and Bell Atlantic concur and cite the legislative history to the 1996 Act.[689]

319. In support of this interpretation, some commenters cite the language of section 251(c)(3). Bell Atlantic contends that the phrase referring to unbundling at "any technically feasible point" means new entrants must have some of their own facilities to connect to that "point."[690] NYNEX argues that the phrase "such telecommunications service" excludes services provided by incumbents, and thus new entrants can only use unbundled elements to provide services that incumbents do not offer.[691]

320. Other commenters supporting this interpretation, including incumbent LECs and CAPs, contend that we must interpret the 1996 Act in a way that gives meaning to each provision. Accordingly, they argue that we cannot allow carriers to use unbundled elements exclusively to provide services that are available at resale, because to do so would make section 251(c)(4), and its associated pricing provision, section 252(d)(3), meaningless.[692] They assert that Congress established a more favorable pricing standard for unbundled elements than resold services to encourage facilities-based entry. They argue that Congress, recognizing that facilities-based carriers incur greater risks than resellers and are a more potent competitive force, created a statutory incentive to build competing facilities by

[688] NYNEX reply at 16-19 (the language of the 1996 Act and the legislative history show that resale takes precedence over the unbundling provision); *accord* MFS reply at 20-22 (unbundled elements are not meant as an alternative to wholesale services for pure resellers).

[689] MFS comments at 37-40; Bell Atlantic comments at 12-14 (*citing* Joint Explanatory Statement at 148, which provides that, because of the significant investment required to duplicate an incumbent's network, new entrants will require access to elements in the incumbents' networks to supplement the facilities owned by the new entrants); *see also* Ameritech comments at 25-31 (Congress intended unbundled elements to be used by carriers that have some of their own facilities because the provision allows carriers to purchase only the elements they need); NYNEX reply at 16-19 (there is no evidence in the 1996 Act or the legislative history indicating that Congress intended to allow carriers to use unbundled elements an alternative way to resell services); USTA comments at 59-66.

[690] Bell Atlantic comments at 12-14. *See also* USTA comments at 59-66.

[691] NYNEX reply at 16-19.

[692] MFS comments at 36-40, 65-66; BellSouth comments at 31-33; NYNEX reply at 16-19; Bell Atlantic comments at 12-14; Bell Atlantic reply at 5-6; *accord* Teleport comments at 39-43 (specific provisions prevail over general ones, and thus, if carriers use unbundled elements to replicate a wholesale service offering, the specific provision dictating the price for wholesale services should be applied rather than the general one for unbundled elements); GTE reply at 17 (the Commission should not deprive incumbent LECs of their compensatory return on resold services).

providing carriers who use unbundled elements with the opportunity to achieve higher profits. According to these commenters, if we allow carriers that merely resell services to obtain the financial benefits of unbundled elements, we would reward them though they have incurred little risk, and we would discourage them from building competing facilities.[693] BellSouth and Ameritech argue that the language of section 251(d)(2)(B) further supports this view because, if carriers can offer a service for resale, then such carriers are not "impaired in their ability to offer a service."[694]

321. Ameritech, NYNEX, and MFS argue that allowing carriers to provide the equivalent of a resold service exclusively through the use of unbundled elements would eviscerate the joint marketing restriction in section 271(e)(1) because there is no comparable restriction in this provision against the joint marketing of services provided through unbundled elements.[695] BellSouth and Ameritech further contend that this view is consistent with the terms of section 251(c)(4)(B), which allows states to prohibit resellers from offering a service to a category of consumers different than the category of consumers the incumbent LEC offers that service to. They contend that, if we allowed requesting carriers to offer resold services exclusively through unbundled elements, then such carriers could evade any possible prohibition on the sale of such services and the authority to impose such limitations on resale is reserved to the states.[696]

322. Finally, a number of incumbent LECs and MFS argue that new entrants should not be allowed to provide services available for resale exclusively through the use of unbundled elements because such entrants could underprice: facilities-based competitors, that must recover joint and common costs, and incumbent LECs, that charge above-cost prices for some services to support universal service obligations. If new entrants could underprice incumbent LECs, they assert, then the ability of the LECs to recover their costs and meet their universal service obligations would be diminished. They also contend that allowing the exclusive use of unbundled elements would lead to arbitrage based on the pricing standards for sections 251(c)(3) and 251(c)(4). They further contend that, if resold services are priced

[693] MFS comments at 37-40, reply at 20-23; Teleport comments at 39-43; NYNEX comments at 29-39; USTA comments at 23-26, reply at 8-10; Bell Atlantic comments at 12-14.

[694] BellSouth comments at 31-33; Ameritech comments at 25-31. For a further discussion of this argument *see supra*, Section V.E.

[695] Ameritech comments at 25-31, reply at 24; NYNEX reply at 16-19; MFS comments at 37-40 (further arguing that the prohibition against joint marketing through the use of resold services evidences Congress's preference for facilities-based competition).

[696] BellSouth comments at 31-33; Ameritech comments at 25-31.

below cost, this will discourage facilities-based entry through the purchase of unbundled elements.[697]

323. The Department of Justice and a number of potential competitors, including AT&T, Cable & Wireless, ALTS and LDDS, reject the view that, to give effect to section 251(c)(4), we must limit access to unbundled elements to those carriers who own some local exchange facilities. They argue that the 1996 Act allows carriers to use recombined network elements exclusively to provide services that are similar or identical to those offered by incumbent LECs for resale. To support this view they contend that the plain language of section 251(c)(3) does not contain any requirement that carriers must own some of their own local exchange facilities before they can purchase and use unbundled elements to provide a telecommunications service. According to these commenters, if we were to impose such a requirement, we would be reading into the 1996 Act a limitation on access to unbundled elements that is not stated anywhere within the statute.[698]

324. The parties which oppose conditioning access to unbundled elements on ownership of local exchange facilities also contend that sections 251(c)(3) and 251(c)(4) offer carriers different opportunities, and thus the rules of statutory construction do not require us to read use restrictions into section 251(c)(3) to distinguish and give meaning to section 251(c)(4).[699] AT&T, the Department of Justice, and others argue, for example, that carriers offering services through resale are limited to the precise service that the incumbent is providing. In contrast, these parties assert that carriers exclusively using unbundled elements can offer different and new services, or the same services with higher quality. In addition, these parties note that, under section 251(c)(3), carriers purchasing an unbundled element can provide all services which that element is typically used to provide, but under section

[697] Ameritech comments at 25-31, reply at 22; Bell Atlantic comments at 12-14, reply at 6; USTA comments at 23-26, reply at 8-10; MFS comments at 37-40, reply at 20-23; *accord* ALLTEL reply at 7; NYNEX comments at 29-39, reply at 16-19; Teleport comments at 39-43; PacTel reply at 25.

[698] AT&T comments at 28-31, reply at 12-20; TCC comments at 27-35; Cable & Wireless comments at 26-27, reply at 20-22; DoJ comments at 48-51, reply at 23-31; Sprint reply at 24-26; LDDS reply at 25-27; ALTS reply at 24-26; *but see* GTE reply at 17-18 (new entrants have just as much opportunity to offer new services through resale as they do through unbundled elements, with resold services new entrants can add value and develop new price plans).

[699] AT&T comments at 28-31, reply at 13-20; LDDS reply at 25-28; TCC comments at 27-35; CompTel reply at 13-22; DoJ comments at 48-51, reply at 23-31 (carriers will likely use resale to purchase services that incumbents price below cost, otherwise these services would never experience competition); Sprint comments at 24-26; Cable & Wireless comments at 20-22; MCI comments at 27-28 (carriers purchasing unbundled elements are not purchasing services, hence they are not the same thing as services available for resale).

251(c)(4), carriers purchasing services available for resale can only provide the service they purchase.[700]

325. Some of the commenters opposing restrictions on access to unbundled elements further argue that allowing carriers to use unbundled elements exclusively to provide the same or similar services that are sold at resale would reduce barriers to entry, and thus promote facilities-based competition. They explain that entrants using unbundled elements will incur lower costs, and will be able to offer more services than carriers who purchase services for resale. They further contend that this means that new entrants using unbundled elements will earn higher revenues, and will have more funds to build competing facilities, than carriers purchasing services available for resale. They also contend that a requirement that carriers own some facilities to purchase unbundled elements would impede entry into the access market and restrict competition for all local services to areas where construction of duplicate facilities is economically justified and has already occurred. Congress, they argue, did not intend to encourage the build out of competing facilities where it is not efficient and the reason Congress included the unbundling provision in the 1996 Act is because most areas only have one network.[701]

326. Some of the commenters who oppose restricting access to unbundled elements to those carriers who own some local exchange facilities also argue that any such restriction would be administratively burdensome and difficult to enforce. They contend, for example, that we would need to specify certain minimum facilities that carriers would need to own to obtain access to unbundled elements. They contend that, if we did not specify such minimum facilities, but merely required ownership or possession of a single facility (or any facility), then the requirement in general would have no practical significance.[702] The Department of Justice contends that we would need to determine whether carriers must own or possess a local exchange facility that is used for each consumer to whom they provide service.[703] In determining the relationship between sections 251(c)(3) and 251(c)(4), the Illinois Commission asks us to consider whether our interpretation would advance competition, reduce

[700] AT&T comments at 28-31, reply at 13-20; LDDS reply at 25-28; TCC comments at 27-35; CompTel reply at 13-22; DoJ comments at 48-51, reply at 23-31; Sprint comments at 24-26; Cable & Wireless comments at 20-22; MCI comments at 27-28.

[701] AT&T comments at 28-31, reply at 13-20; CompTel reply at 13-22; TCC comments at 27-35; DOJ comments at 48-51, reply at 23-31.

[702] DoJ comments at 48-51, reply at 23-31; AT&T reply at 13-20; Cable & Wireless reply at 20-22; LDDS reply at 25-30.

[703] DoJ comments at 48-51, reply at 23-31.

regulation, preserve and advance universal service, remove statutory, regulatory and economic impediments to new entry, and provide states with flexibility.[704]

327. Finally, NYNEX argues that carriers should not be permitted to offer services to consumers by combining unbundled elements and resold services because the different rates for unbundled elements and resale of services would allow for arbitrage.[705] Comptel and Sprint counter, however, that the 1996 Act does not prohibit the combined use of unbundled elements and resold services. Comptel further contends that Congress intended to provide new entrants with maximum flexibility in connection with opportunities to enter local telephone markets and thus it would be contrary to Congressional intent, as well as anticompetitive, if we prohibited carriers from using a combination of unbundled elements and services available for resale.[706]

3. Discussion

328. The language of section 251(c)(3) is cast exclusively in terms of obligations imposed on incumbent LECs, and it does not discuss, reference, or suggest a limitation or requirement in connection with the right of new entrants to obtain access to unbundled elements. We conclude, therefore, that Congress did not intend section 251(c)(3) to be read to contain any requirement that carriers must own or control some of their own local exchange facilities before they can purchase and use unbundled elements to provide a telecommunications service. We note that the Illinois Commission has reached the same conclusion.[707]

329. We reject the arguments advanced by Bell Atlantic and NYNEX that the language of section 251(c)(3) requires carriers seeking access to unbundled elements to own some local exchange facilities, and that this serves to distinguish section 251(c)(3) from section 251(c)(4). The "at any technically feasible point" language in section 251(c)(3) refers to points in an incumbent LEC's network where new entrants may obtain access to elements. It does not, however, require that new entrants interconnect local exchange facilities which they own or control at that technically feasible access point. If we were to conclude otherwise, then new entrants would be prohibited from requesting two network elements that

[704] Illinois Commission comments at 38.

[705] NYNEX comments at 38-39.

[706] CompTel reply at 20-22; Sprint comments at 23-28.

[707] AT&T Communications of Illinois, Inc. *et. al.*, Petition for a Total Local Exchange Wholesale Service Tariff from Illinois Bell Telephone Company, Nos. 95-0458 and 95-0531 (consol.) at 63-65 (Illinois Commission June 26, 1996).

are connected to each other because the new entrant would be required to connect a single network element to a facility of its own. The 1996 Act, however, does not impose any limitations on carriers' ability to obtain access to unbundled network elements. Moreover, we conclude that Congress did not intend to limit access to unbundled elements in this manner because such a limit would seriously inhibit the ability of potential competitors to enter local markets through the use of unbundled elements, and thus would retard the development of local exchange competition. We also reject NYNEX's argument that the phrase "such telecommunications service" excludes services provided by the incumbent. This interpretation is inconsistent with the 1996 Act's definition of a telecommunications service, which includes all telecommunications services provided by an incumbent.

330. We also reject the argument that language in the Joint Explanatory Statement requires us to conclude that carriers must own facilities to obtain access to unbundled elements. Congress may have recognized that carriers that own some of their own facilities will more likely benefit by entering local markets through unbundled elements rather than resale, but this consideration does not imply that carriers must own their own facilities to obtain access to unbundled elements.[708]

331. We are not persuaded that, in order to give meaning and effect to section 251(c)(4), we must require new entrants to own some local exchange facilities in order to obtain access to unbundled elements. We disagree with the premise that no carrier would consider entering local markets under the terms of section 251(c)(4) if it could use recombined network elements solely to offer the same or similar services that incumbents offer for resale. We believe that sections 251(c)(3) and 251(c)(4) present different opportunities, risks, and costs in connection with entry into local telephone markets, and that these differences will influence the entry strategies of potential competitors. We therefore find that it is unnecessary to impose a limitation on the ability of carriers to enter local markets under the terms of section 251(c)(3) in order to ensure that section 251(c)(4) retains functional validity as a means to enter local phone markets.

332. The principal distinction between sections 251(c)(3) and 251(c)(4), in terms of the opportunities each section presents to new entrants, is that carriers using solely unbundled elements, compared with carriers purchasing services for resale, will have greater opportunities to offer services that are different from those offered by incumbents. More specifically, carriers reselling incumbent LEC services are limited to offering the same service an incumbent offers at retail. This means that resellers cannot offer services or products that incumbents do not offer. The only means by which a reseller can distinguish the services it offers from those of an incumbent is through price, billing services, marketing efforts, and to some extent, customer service. The ability of a reseller to differentiate its products based on

[708] *See* Joint Explanatory Statement at 148.

price is limited, however, by the margin between the retail and wholesale price of the product.

333. In contrast, a carrier offering services solely by recombining unbundled elements can offer services that differ from those offered by an incumbent. For example, some incumbent LECs have capabilities within their networks, such as the ability to offer Centrex, which they do not use to offer services to consumers. Carriers purchasing access to unbundled elements can offer such services. Additionally, carriers using unbundled elements can bundle services that incumbent LECs sell as distinct tariff offerings, as well as services that incumbent LECs have the capability to offer, but do not, and can market them as a bundle with a single price. The ability to package and market services in ways that differ from the incumbent's existing service offerings increases the requesting carrier's ability to compete against the incumbent and is likely to benefit consumers.[709] Additionally, carriers solely using unbundled network elements can offer exchange access services. These services, however, are not available for resale under section 251(c)(4) of the 1996 Act.[710]

334. If a carrier taking unbundled elements may have greater competitive opportunities than carriers offering services available for resale, they also face greater risks. A carrier purchasing unbundled elements must pay for the cost of that facility, pursuant to the terms and conditions agreed to in negotiations or ordered by states in arbitrations.[711] It thus faces the risk that end-user customers will not demand a sufficient number of services using that facility for the carrier to recoup its cost. (Many network elements can be used to provide a number of different services.) A carrier that resells an incumbent LEC's services does not face the same risk. This distinction in the risk borne by carriers entering local markets through resale as opposed to unbundled elements is likely to influence the entry strategies of various potential competitors. Some new entrants will be unable or unwilling to bear the financial risks of entry by means of unbundled elements and will choose to enter local markets under the terms of section 251(c)(4) irrespective of the fact that they can obtain access to unbundled elements without owning any of their own facilities.[712] Moreover, some markets may never support new entry through the use of unbundled elements because new entrants seeking to offer services in such markets will be unable to stimulate sufficient demand to recoup their investment in unbundled elements. Accordingly, in these markets

[709] *See* AT&T comments at 25-31.

[710] *See infra*, Section VII; *see also* Letter from Bernard J. Ebbers, President LDDS WorldCom, to Rachelle B. Chong, Commissioner, Federal Communications Commission, July 11, 1996.

[711] *See infra*, Section VII, describing the terms under which new entrants will pay for the cost of unbundled elements.

[712] *See, e.g.*, AT&T reply at 13-20.

carriers will enter through the resale of incumbent LEC services, irrespective of the fact that they could enter exclusively through the use of unbundled elements.[713]

335. We are not persuaded by the argument set forth by Ameritech, NYNEX, and MFS that allowing carriers to use solely recombined network elements would eviscerate the joint marketing restriction in section 271(e)(1).[714] It is true that the terms of section 271(e) do not restrict joint marketing through the use of unbundled elements pursuant to section 251(c)(3). As discussed above, differences in opportunities and risk will cause some new entrants to consider entering local telephone markets through resale of incumbent LEC services, even if they could enter solely through the use of unbundled elements. Thus, we conclude that section 271(e)(1) will impose a meaningful limitation on joint marketing.

336. We note, moreover, that the 1996 Act does not prohibit all forms of joint marketing. For example, it does not prohibit carriers who own local exchange facilities from jointly marketing local and interexchange service. Nor does it prohibit joint marketing by carriers who provide local exchange service through a combination of local facilities which they own or possess, and unbundled elements. Because the 1996 Act does not prohibit all forms of joint marketing, we see no principled basis for reading into section 271(e)(1) a further limitation on the ability of carriers to jointly market local and long distance services without concluding that this section prohibits all forms of joint marketing. In other words, we see no basis upon which we could conclude that section 271(e)(1) restricts joint marketing of long distance services, and local services provided solely through the use of unbundled network elements, without also concluding that the section restricts the ability of carriers to jointly market long distance services and local services that are provided through a combination of a carriers' own facilities and unbundled network elements.[715] Moreover, we do not believe that we have the discretion to read into the 1996 Act a restriction on competition which is not required by the plain language of any of its sections.

337. We also reject the argument advanced by BellSouth and Ameritech that allowing carriers to use solely unbundled elements to provide services available through resale would allow carriers to evade a possible prohibition, which is reserved to the discretion of the states,

[713] *See, e.g.*, Comptel reply at 13-16.

[714] Section 271(e)(1) provides that "[u]ntil a Bell operating company is authorized pursuant to subsection (d) to provide interLATA services in an in-region State, or until 36 months have passed since the date of enactment . . . a telecommunications carrier that serves greater than 5 percent of the Nation's presubscribed access lines may not jointly market in such State telephone exchange service obtained from such company pursuant to section 251(c)(4) with interLATA services." 47 U.S.C. § 271(e)(1).

[715] *See also* AT&T reply at 14-15 (the added risk of unbundled elements also means that new entrants are not circumventing section 271's joint marketing restriction because the additional risk justifies allowing carriers more flexibility to jointly market services); LDDS reply at 28-30.

on the sale of certain services to certain categories of consumers. Under section 251(c)(4)(B) states are permitted to restrict resellers from offering certain services to certain consumers, in the same manner that states restrict incumbent LECs.[716] For example, states that prohibit incumbent LECs from selling to business consumers residential services priced below cost have the ability to restrict resellers from selling such services to business consumers.

338. We do not believe, however, that carriers using solely unbundled elements to provide local exchange services will be able to evade any potential restrictions states may impose under section 251(c)(4)(B). In this section Congress granted the states the discretion to impose certain limited restrictions on the sale of services available for resale. It did not, however, grant states, in section 251(c)(3), the same discretion to impose similar restrictions on the use of unbundled elements. Accordingly, we are not persuaded that allowing carriers to use solely unbundled elements to provide services that incumbent LECs offer for resale would allow competing carriers to evade a possible marketing restriction that Congress intended to reserve to the discretion of the states.

339. We agree with those commenters who argue that it would be administratively impossible to impose a requirement that carriers must own some of their own local exchange facilities in order to obtain access to unbundled elements, and they must use these facilities, in combination with unbundled elements, for the purpose of providing local services. We conclude that it would not be possible to identify the elements carriers must own without creating incentives to build inefficient network architectures that respond not to marketplace factors, but to regulation. We further conclude that such a requirement could delay possible innovation. These effects would diminish competition for local telephone services, and thus any local exchange facilities requirement would be inconsistent with the 1996 Act's goals of promoting competition. Moreover, if we imposed a facilities ownership requirement that attempted to avoid these competitive pitfalls, it would likely be so easy to meet it would ultimately be meaningless.

340. We reject the argument that requiring carriers to own some local exchange facilities would promote competition for local exchange services, or that we should impose such a requirement for other policy reasons. To the contrary, we conclude that allowing carriers to use unbundled elements as they wish, subject only to the maintenance of the key elements of the access charge regime, described below at section VII, will lead to more efficient competition in local phone markets. If we were to limit access to unbundled network elements to those markets where carriers already own, or could efficiently build, some local exchange facilities, we would limit the ability of carriers to enter local markets under the pricing standard for unbundled elements to those markets that could efficiently support duplication of some or all of the incumbent LECs' networks. We believe that such a result could diminish competition, and that allowing new entrants to take full advantage of

[716] 47 U.S.C. § 251(c)(4)(B).

incumbent LECs' scale and scope economies will promote more rapid and efficient entry and will result in more robust competition.

341. Finally, we conclude that a new entrant may offer services to one group of consumers using unbundled network elements, and it may offer services to a separate group of consumers by reselling an incumbent LEC's services. With the exception noted in Section VII, *infra*, we do not address the issue of whether the 1996 Act permits a new entrant to offer services to the same set of consumers through a combination of unbundled elements and services available for resale.

I. Provision of Interexchange Services Through The Use of Unbundled Network Elements

1. Background

342. In the NPRM, we tentatively concluded that interexchange carriers are telecommunications carriers, and thus such carriers are entitled to access to unbundled elements under the terms of section 251(c)(3). We also tentatively concluded that carriers may request unbundled elements for purposes of originating and terminating toll services, in addition to any other services they seek to provide, because section 251(c)(3) provides that carriers may request unbundled elements to provide a "telecommunications service," and interexchange services are a telecommunications service.[717]

343. In the NPRM, we sought comment on whether the 1996 Act permits carriers to use unbundled elements to provide exchange access services only, or whether carriers seeking to provide exchange access services using unbundled elements must provide local exchange service as well. We premised the latter view on the definition of the term "network element," as a facility and not a service, and on the pricing standard under section 252(d)(1) that requires network elements to be priced based on economic costs (rather than jurisdictionally separated costs.)[718] We also sought comment on whether allowing carriers to purchase unbundled elements to provide exchange access services exclusively would be inconsistent with the terms of sections 251(i) and 251(g) and, further, whether this would result in a fundamental jurisdictional shift of the administration of interstate access charges to state jurisdictions.[719]

[717] NPRM at paras. 159, 163.

[718] *See supra*, Section V.C. and *infra*, Section VII.

[719] NPRM at para. 164.

344. Finally, in the NPRM, we tentatively concluded that, if carriers purchase unbundled elements to provide exchange access services to themselves, irrespective of whether they provide such services alone or in connection with local exchange services, incumbent LECs cannot assess Part 69 access charges in addition to charges for the cost of the unbundled elements. We based this tentative conclusion on the view that the imposition of access charges in addition to cost-based charges for unbundled elements would depart from the statutory mandate of cost-based pricing of elements.[720]

2. Comments

345. A number of potential competitors, as well as the Department of Justice, the Illinois and Ohio Commissions, NYNEX, and USTA, agree with our tentative conclusions that interexchange carriers may obtain access to unbundled elements, and that carriers may purchase unbundled elements for the purpose of originating and terminating interexchange services because such services are a type of telecommunications service.[721] Some of these commenters support our tentative interpretation of the 1996 Act by arguing that section 251(c)(3) requires incumbent LECs to provide access to network elements without regard to the types of services carriers seek to offer, or the jurisdictional nature of such services. They contend that new entrants are paying the full cost for an element and thus are entitled to recover their costs by offering any services that use the element.[722] Others argue that, by its plain terms, the 1996 Act does not allow incumbent LECs to limit the types of services any carrier can offer in connection with the sale of unbundled elements.[723]

346. The Department of Justice and AT&T also contend that there are substantial economies of scope in the provision of local exchange and exchange access services, and that new entrants will need the revenue streams from both services to support the high cost of

[720] NPRM at para. 165.

[721] NYNEX comments at 20-22; TCC comments at 27-35; Sprint comments at 67-70, reply at 32-34; Cable & Wireless comments at 27-32, reply at 20; MCI comments at 77-83; COMAV comments at 31; DoJ comments at 35-47; CompTel comments at 27,65; Frontier comments at 11, reply at 8-11; Illinois Commission at 51-52; Ohio Commission comments at 57-58; AT&T reply at 23-24; LDDS reply at 36-38; Excel comments at 4; TCC comments at 28; USTA comments at 59-66; *see also* Texas Public Utility Counsel comments at 39-40 (competition will push access rates to cost so the Commission should not put effort into protecting access charges); Citizens Utilities comments at 22.

[722] *See, e.g.*, DoJ comments at 35-47; AT&T reply at 23-24; TCC comments at 27-35; LDDS reply at 36-38 (because carriers pay the full unseparated cost of a network element, they are entitled to provide the full range of services over those elements); Excel comments at 4; TCC comments at 28; Frontier reply at 24-26.

[723] *See, e.g.*, DoJ comments at 35-47; Illinois Commission comments at 51-52; MCI comments at 77-84.

constructing competing local exchange facilities.[724] The Department of Justice and Comptel further assert that, if incumbent LECs are allowed to maintain market power over exchange access services then, when the BOCs are allowed into in-region long distance markets, the BOCs will be able to underprice other competitors in the sale of long distance services, and in the sale of bundled local and long distance services, and thus could undermine current competitive conditions in the long distance market.[725]

347. The commenters which support our tentative conclusion that carriers may use unbundled elements to provide interexchange services disagree, however, on whether requesting carriers can use unbundled elements solely to provide interexchange services or whether they must provide other services, including local services, as well. AT&T, MCI, Cable & Wireless, and GCI argue that the ability to provide exchange access services is a function of the loop, and the plain language of the 1996 Act does not permit incumbent LECs to deny requesting carriers the ability to obtain that functionality alone.[726] Sprint and the Department of Justice, however, contend that, while the 1996 Act does not prohibit carriers purchasing unbundled elements from offering only exchange access services, as a practical matter, any carrier purchasing access to a local loop will have to offer both local exchange and exchange access services.[727] The Department of Justice bases its contention on the assumption that the Commission will require carriers purchasing access to a local loop to take exclusive control of that loop. The Department of Justice explains that such a requirement is consistent with section 252's method for pricing network elements and with industry practice at the time the 1996 Act was adopted.[728] Sprint bases its contention on the view that allowing carriers to obtain access to local loops in order to provide only a single service is inconsistent with the idea that a network element is a facility and not a service.[729] The Department of

[724] DoJ comments at 35-47; AT&T reply at 23-24.

[725] CompTel comments at 19-27; DoJ comments at 35-47.

[726] AT&T reply at 23-24; Cable & Wireless comments at 27-32; MCI comments at 77-84 (defining a local loop as a single network element is inconsistent with the 1996 Act's definition of a network element which states that a functionality can be a network element); GCI comments at 11; *see also* ACTA comments at 17; Excel comments at 4.

[727] Sprint comments at 67-70, reply at 34-36; DoJ comments at 35-47; *see also* LDDS reply at 37; *cf.* Citizens Utilities at 22 (it is unlikely that IXCs will purchase unbundled elements to provide solely exchange access services, because in the future they will market services through "one stop shopping," where they will offer local and long distance services as a bundled product); MFS comments at 65-66 (to meet market demand carriers will have to offer the services customers demand, and it is unlikely they will want only interexchange services).

[728] DoJ comments at 35-47.

[729] Sprint comments at 67-70.

Justice and Sprint thus argue that any carrier purchasing exclusive access to a local loop would have to provide all services demanded by the customer to whom that loop is dedicated. If a customer desires to receive both local exchange and exchange access services, then the carrier purchasing access to that customer's loop would have to provide both of these services.[730] Sprint observes, in contrast, that if a customer has two local loops dedicated to its premises a carrier could purchase access to one of the loops merely to provide exchange access services, because the customer could receive local exchange service from another carrier over the other local loop.[731]

348. In contrast, NYNEX, USTA, the Ohio Commission, and Puerto Rico Telephone argue that the 1996 Act does not impose any obligation on incumbent LECs to provide access to unbundled elements solely to allow carriers to provide originating and terminating exchange access services. They argue that carriers purchasing access to local loops in order to provide exchange access services must also provide local exchange services as well.[732] USTA supports its contention by arguing that, in order to obtain "access to" unbundled network elements, a carrier must "interconnect" to them under the terms of section 251(c)(2), but that carriers are eligible for interconnection under section 251(c)(2) only if they offer both local exchange and exchange access services. Accordingly, USTA asserts that carriers that interconnect to unbundled elements must offer both of these services.[733] NYNEX argues that sections 251(g) and (i), and the legislative history to the 1996 Act, make clear that Congress did not intend for section 251 to supplant the existing access charge regime, and that carriers thus can not obtain unbundled local loops merely to offer exchange access services. Carriers seeking access to unbundled loops must take the entire functionality of this element, and thus will have to offer both local exchange and exchange access services.[734] Puerto Rico Telephone further argues that the subsidies built into access charge prices enable incumbent LECs to meet their universal service obligations, and that a premature elimination of this contribution would cause massive increases in local service rates.[735]

[730] Sprint comments at 67-70; DoJ comments at 35-47; *accord* LDDS reply at 37.

[731] Sprint comments at 67-70.

[732] NYNEX comments at 6, 21-22; USTA comments at 59-66; Ohio Commission comments at 57-58; Puerto Rico Tel. comments at 11-14.

[733] USTA comments at 56-66.

[734] NYNEX comments at 6, 20-22; *see also* USTA comments at 56-66 (concurring with NYNEX's reasoning).

[735] Puerto Rico Tel. comments at 11-14; *see also* USTA reply comments at 6-8; SBC comments at 77-82 (allowing carriers to use unbundled elements to provide themselves exchange access will result in arbitrage between the price of unbundled network elements and access charges); PacTel reply at 35-36.

349. Disputing our tentative conclusion, a number of incumbent LECs contend that the 1996 Act prohibits interexchange carriers from purchasing unbundled elements to provide exchange access services to themselves and thus avoid payment of access charges to incumbent LECs.[736] Bell Atlantic contends that carriers purchasing unbundled elements from an incumbent LEC must pay access charges for toll calls completed on that incumbent LEC's network. Thus, for example, if a carrier purchases an unbundled loop, and completes toll calls using its own switch and the unbundled loop, it must pay the incumbent LEC from which it purchased the loop both the cost of the loop and the carrier common line charge associated with it.[737]

350. The commenters opposing interexchange carriers' use of unbundled elements to provide interexchange services offer a number of arguments to support their view. For example, they argue that section 251(g) means that incumbent LECs must offer exchange access services under the same terms that they did prior to the passage of the 1996 Act, and the "receipt of compensation" phrase in this section means that interexchange carriers must continue to pay current access charges until they are reformed in an access charge rulemaking proceeding.[738] They also argue that the express language of section 251(i) makes clear that the Commission's section 201 authority to regulate interstate access charges is not overridden by section 251(c)(3). They assert that, if we interpret section 251(c)(3) as allowing carriers to use unbundled elements to provide interexchange services, then our section 201 authority to regulate interstate access charges would be limited, in violation of section 251(i).[739] They further argue that allowing carriers to use unbundled elements to provide exchange access services to themselves, and interexchange services to end users, would be "inconsistent" with the purposes of section 251, which was designed to promote competition for local telephone

[736] BellSouth comments at 30-31, 60-63, reply at 45-46; Bell Atlantic comments at 8-12; Texas Statewide Tel. Cooperative, Inc. comments at 16-17; PacTel comments at 78-80; ALLTEL reply at 6-7; Rural Tel. Coalition reply at 7-11; Ameritech comments at 26, reply at 25; SBC comments at 77-82; PacTel reply at 36; U S West comments at 59-64, reply at 6-8; *see also* NECA comments at 3-6; GTE comments at 74-79 (carriers using unbundled network elements to originate and terminate toll services should be required to charge their interexchange affiliate the same access prices they charge unaffiliated carriers).

[737] Bell Atlantic comments at 8-12.

[738] *See, e.g.*, BellSouth comments at 63-64; Texas Statewide Tel. Cooperative, Inc. comments at 16-17; Bell Atlantic comments at 8-12; Time Warner comments at 60-63; PacTel comments at 78-80, reply at 36; NECA comments at 3-6, reply at 5; SBC comments at 77-82; *see also* USTA comments at 5-8; GTE comments at 74-79; U S West comments at 61; ALLTEL reply at 6-7; Rural Tel. Coalition reply at 7-11.

[739] BellSouth comments at 63-64; USTA comments at 59-66; NYNEX comments at 9-21; Bell Atlantic comments at 8-12; Time Warner comments at 60-63; Puerto Rico Tel. comments at 10-14; Texas Statewide Tel. Cooperative, Inc. comments at 16-17; NECA reply at 5; GTE comments at 74-79; Rural Tel. Coalition reply at 7-11.

services and was not intended as a means to evade access charges.[740] They further argue that such an interpretation would transfer control of interstate access charges to the states.[741]

351. SBC, PacTel and GTE argue that the Senate version of the 1996 Act (which was amended by the Conference Committee) makes clear that section 251 was not intended to supplant the existing access charge regime.[742] PacTel further argues that section 251(c)(3) allows carriers to obtain unbundled elements to "offer" telecommunications services, but not to receive exchange access services.[743] Time Warner contends that none of the provisions of the 1996 Act displace section 201, which grants the Commission authority to establish access charges.[744] NECA contends that the Commission may not change the separations rules that allocate costs between interstate and intrastate jurisdictions without a recommendation from the Joint Board and that it cannot modify or repeal interstate access charge rules without a formal rulemaking. Accordingly, NECA concludes, carriers must still pay interstate access charges.[745] NECA also argues that, because carriers could offer long distance services without using unbundled elements, under the "impairment" standard in section 251(d)(2), incumbent LECs need not provide unbundled elements to enable carriers to offer interexchange services.[746]

352. SBC also argues that allowing carriers to use unbundled elements to provide interexchange services will decrease the incentives for new entrants to invest in competing facilities. As a result, SBC concludes consumers are not likely to benefit because new

[740] BellSouth comments at 63-64, reply at 45-46; Bell Atlantic reply at 4-6; Texas Statewide Tel. Cooperative, Inc. comments at 16-17; Ameritech reply at 25-26; SBC comments at 77-82 (the terms of section 251 relate only to interconnection between carriers offering local exchange services); Bell Atlantic comments at 8-12; Bay Springs, *et al.* comments at 16; *see also* Minnesota Ind. Coalition comments at 34-38 (interexchange service is not an incumbent LEC exchange service and thus IXCs should not be allowed to circumvent access charges).

[741] BellSouth comments at 63-64; NYNEX comments at 9-21; U S West comments at 59-66; GTE comments at 74-79; PacTel reply at 36; *see also* Rural Tel. Coalition reply at 7-11.

[742] SBC comments at 77-82; GTE comments at 74-79; PacTel comments at 78-80; *see also* NECA comments at 3-6.

[743] PacTel comments at 78-80.

[744] Time Warner comments at 60-63.

[745] NECA comments at 3-6, reply at 3-7.

[746] NECA reply at 5-6.

entrants will price exchange access services just below the levels charged by incumbent LECs.[747] SBC and NECA contend that section 251(d)(3) preserves the authority of states over intrastate access charges.[748] Bell Atlantic contends that Congress could not have intended to overturn the existing access charge regime without expressly stating this.[749] Finally, Bell Atlantic and Ameritech argue that it would be inappropriate to allow carriers to use unbundled elements to provide interexchange services because this would amount to a flash cut reform of access charges before universal service issues are addressed. They reason that, since interstate access charges subsidize local service prices, to allow access pricing to be circumvented would prevent incumbent LECs from meeting their universal service obligations and would, thus, jeopardize current local phone rates.[750] The Rural Telephone Coalition agrees and notes, in particular, that rural ratepayers could be subject to higher local service rates if interexchange carriers are allowed, before proceedings regarding access reform and universal service are completed, to bypass access charges through the purchase of unbundled elements.[751]

353. A number of potential competitors dispute the incumbent LECs' arguments. MCI and the Department of Justice contend that section 251(g) means that the exchange access rules applicable to incumbent LECs before the 1996 Act was passed continue to apply until the Commission issues "superseding regulations." Citing the Joint Explanatory Statement, they assert that the "superseding regulations" referred to are the regulations that the Commission must issue to implement the requirements of section 251. They argue that if section 251 did not affect some change in the rules on access charges, then the "receipt of compensation" language in section 251(g) would be unnecessary.[752]

354. With respect to section 251(i), Cable & Wireless contends that this section merely preserves the Commission's authority under section 201. According to Cable &

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[747] SBC reply at 9-11.

[748] SBC comments at 77-82; NECA comments at 3-6; *see also* NYNEX comments at 9-21 (allowing carriers to use unbundled elements to provide exchange access services to themselves would preempt state access charge policies).

[749] Bell Atlantic comments at 8-12;

[750] Bell Atlantic comments at 8-12, reply at 4-6; Ameritech reply at 24-26 (prices for exchange access services should be rebalanced through a direct examination of universal service issues); *see also* USTA comments at 61.

[751] Rural Tel. Coalition reply at 8.

[752] DoJ comments at 52-53; MCI comments at 77-84. *But cf.* GTE reply at 39-40 (the argument that section 251(g) serves to preserve existing access charges until the Commission adopts regulations implementing section 251 deprives section 251(g) of any meaning because there is no need to preserve existing access charges).

Wireless, this means that carriers can obtain originating and terminating access either by purchasing unbundled network elements under section 251(c)(3) or pursuant to access charge tariffs.[753] MCI argues that section 251(i) preserves the Commission's authority to regulate interstate access charges where incumbent LECs are still providing these services (rather then where new entrants are using unbundled elements.)[754] MCI also argues that allowing carriers to use unbundled elements to provide originating and terminating toll services would not deprive the Commission of authority to set prices for exchange access services because in this proceeding the Commission will direct the states on how to set prices for unbundled elements.[755]

355. LDDS denies that the language of the Senate (as well as House) versions of the 1996 Act indicate that section 251 was not intended to supplant the existing access charge structure, and points to the fact that the language in these bills supporting this argument was not included in the final bill as amended by the Conference Committee.[756] MCI and LDDS argue, respectively, that allowing carriers to use unbundled elements to provide exchange access services is not inconsistent with Congress' intent in writing section 251 because Congress intended for the 1996 Act to create a single set of rules governing relationships between carriers,[757] and the 1996 Act is also about eliminating inefficient pricing in telecommunications services, including inefficient pricing of current access charges.[758] Frontier contends that the statutorily-mandated rates that incumbent LECs may charge for unbundled elements will not be the same as the rates they charge for exchange access services. Frontier argues, however, that the correct response to this is not to limit the purposes for which unbundled elements may be used, but to reform access charge prices to reflect costs.[759] Finally, the Ohio Commission and a number of potential local competitors agree with our tentative conclusion that incumbent LECs cannot assess part 69 access charges

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[753] Cable & Wireless comments at 26-32 (arguing same point in connection with section 251(g)); *see also* CompTel comments at 66.

[754] MCI comments at 77-83.

[755] *Id.*

[756] LDDS reply at 32.

[757] MCI comments at 77-83.

[758] LDDS reply at 30-32.

[759] Frontier reply at 9-11.

on top of prices for unbundled network elements because this would allow incumbent LECs to recover fees in excess of costs, in violation of the pricing standards in section 252.[760]

3. Discussion

356. We confirm our tentative conclusion in the NPRM that section 251(c)(3) permits interexchange carriers and all other requesting telecommunications carriers, to purchase unbundled elements for the purpose of offering exchange access services, or for the purpose of providing exchange access services to themselves in order to provide interexchange services to consumers.[761] Although we conclude below that we have discretion under the 1934 Act, as amended by the 1996 Act, to adopt a limited, transitional plan to address public policy concerns raised by the bypass of access charges via unbundled elements, we believe that our interpretation of section 251(c)(3) in the NPRM is compelled by the plain language of the 1996 Act. As we observed in the NPRM, section 251(c)(3) provides that requesting telecommunications carriers may seek access to unbundled elements to provide a "telecommunications service," and exchange access and interexchange services are telecommunications services. Moreover, section 251(c)(3) does not impose restrictions on the ability of requesting carriers "to combine such elements in order to provide such telecommunications service[s]."[762] Thus, we find that there is no statutory basis upon which we could reach a different conclusion for the long term.

357. We also confirm our conclusion in the NPRM that, for the reasons discussed below in section V.J, carriers purchase rights to exclusive use of unbundled loop elements, and thus, as the Department of Justice and Sprint observe, such carriers, as a practical matter, will have to provide whatever services are requested by the customers to whom those loops are dedicated. This means, for example, that, if there is a single loop dedicated to the premises of a particular customer and that customer requests both local and long distance service, then any interexchange carrier purchasing access to that customer's loop will have to offer both local and long distance services. That is, interexchange carriers purchasing unbundled loops will most often not be able to provide solely interexchange services over those loops.

358. We reject the argument advanced by a number of incumbent LECs that section 251(i) demonstrates that requesting carriers using unbundled elements must continue to pay

[760] Ohio Commission comments at 58; TCC comments at 27-35; Sprint comments at 67-70; MCI comments at 73; DoJ comments at 35-47,52-53; CompTel comments at 39; Excel comments at 4; AT&T reply at 23-24; LDDS reply at 36-38.

[761] *See* NPRM at paras. 159-65.

[762] 47 U.S.C. § 251(c)(3).

access charges. Section 251(i) provides that nothing in section 251 "shall be construed to limit or otherwise affect the Commission's authority under section 201."[763] We conclude, however, that our authority to set rates for these services is not limited or affected by the ability of carriers to obtain unbundled elements for the purpose of providing interexchange services. Our authority to regulate interstate access charges remains unchanged by the 1996 Act. What has potentially changed is the volume of access services, in contrast to the number of unbundled elements, interexchange carriers are likely to demand and incumbent LECs are likely to provide. When interexchange carriers purchase unbundled elements from incumbents, they are not purchasing exchange access "services." They are purchasing a different product, and that product is the right to exclusive access or use of an entire element. Along this same line of reasoning, we reject the argument that our conclusion would place the administration of interstate access charges under the authority of the states. When states set prices for unbundled elements, they will be setting prices for a different product than "interstate exchange access services." Our exchange access rules remain in effect and will still apply where incumbent LECs retain local customers and continue to offer exchange access services to interexchange carriers who do not purchase unbundled elements, and also where new entrants resell local service.[764]

359. We also reject the incumbent LECs' arguments that language contained in bills that were not enacted, or legislative history connected to such bills, demonstrates that carriers cannot purchase access to unbundled elements to provide exchange access services to themselves, for the purpose of providing long distance services to consumers. The incumbent LECs are arguing in effect, that we should read into the current statute a limitation on the ability of carriers to use unbundled network elements, despite the fact that no such limitation survived the Conference Committee's amendments to the 1996 Act. We conclude, however, that the language of section 251(c)(3), which provides that telecommunications carriers may purchase unbundled elements in order to provide a telecommunications service[765] is not ambiguous. Accordingly, we must interpret it pursuant to its plain meaning and not by referencing earlier versions of the statute that were ultimately not adopted by Congress.

360. Moreover, we do not believe that the Joint Explanatory Statement, which describes the House and Senate versions of the statute, and the 1996 Act as enacted, compels a different conclusion. The Joint Explanatory Statement states that the statute incorporates provisions from the Senate Bill and the House Amendment in connection with the

[763] 47 U.S.C. § 251(i).

[764] The application of our exchange access rules in the circumstances described will continue beyond the transition period described at *infra*, Section VII.

[765] 47 U.S.C. § 251(c)(3).

interconnection model adopted in section 251.[766] It notes that the provision in the Senate Bill relating to interconnection did not apply to interconnection arrangements between local and long distance carriers for the purpose of providing long distance services.[767] The text of section 251 of the Senate Bill is consistent with this comment because it states that a local exchange carrier must offer interconnection to other carriers to allow such carriers to provide telephone exchange or exchange access services.[768] The Joint Explanatory Statement, however, does not describe any restriction in the House Amendment regarding the ability of carriers to use unbundled elements to provide long distance service.[769] Indeed, the House Amendment specifically states that carriers may obtain access to unbundled elements to offer "a telecommunications service," which is not limited to telephone exchange and exchange access services.[770] We observe that the Conference Committee incorporated language from the House Amendment and not the Senate Bill in describing in section 251(c)(3) the services carriers may offer using unbundled elements. Accordingly, we do not believe that the Joint Explanatory Statement's description of the provision in the Senate Bill controls our interpretation of section 251(c)(3) as enacted.

361. We also reject the argument that allowing carriers to use unbundled elements to provide originating and terminating toll services is inconsistent with the purposes of the 1996 Act. Congress intended the 1996 Act to promote competition for not only telephone exchange services and exchange access services, but also for toll services. Section 251(b)(3), for example, imposes a duty on LECs to provide dialing parity for telephone toll service.

362. We disagree with the incumbent LECs which argue that section 251(g) requires requesting carriers using unbundled elements to continue to pay federal and state access charges indefinitely. Section 251(g) provides that the federal and state equal access rules applicable before enactment, including the "receipt of compensation," will continue to apply after enactment, "until such restrictions and obligations are explicitly superseded by regulations prescribed by the Commission after such date of enactment."[771] We believe this provision does not apply to the exchange access "services" requesting carriers may provide

[766] Joint Explanatory Statement at 117-123.

[767] *Id.* at 117.

[768] S. 652, 104th Cong., 1st Sess. § 251 (1995).

[769] Joint Explanatory Statement at 120-121.

[770] H.R. 1555, 104th Cong., 1st. Sess. § 242 (1995).

[771] 47 U.S.C. § 251(g).

themselves or others after purchasing unbundled elements. Rather, the primary purpose of section 251(g) is to preserve the right of interexchange carriers to order and receive exchange access services if such carriers elect not to obtain exchange access through their own facilities or by means of unbundled elements purchased from an incumbent.

363. We affirm our tentative conclusion in the NPRM that, telecommunications carriers purchasing unbundled network elements to provide interexchange services or exchange access services are not required to pay federal or state exchange access charges except as described in section VII, *infra*, for a temporary period. As we explained in the NPRM, if we were to require indefinitely carriers purchasing unbundled elements to also pay access charges, then incumbent LECs would receive compensation in excess of their underlying network costs. This result would be inconsistent with the pricing standard for unbundled elements set forth in section 252(d)(1).[772] In addition, we believe this conclusion is consistent with Congress's overriding goal of promoting efficient competition for local telephony services, because it will allow, in the long term, new entrants using unbundled elements to compete on the basis of the economic costs underlying the incumbent LECs' networks. The facilities used to provide exchange access services are the same as those used to provide local exchange services. We note, however, as discussed below,[773] that certain additional charges are necessary for a specific, limited duration to smooth the transition to a competitive marketplace.

364. We further conclude that when a carrier purchases a local loop for the purpose of providing interexchange services or exchange access services,[774] incumbent LECs may not recover the subscriber line charge (SLC) now paid by end users. The SLC recovers the portion of loop costs allocated to the interstate jurisdiction, but as discussed in Section II.C, *supra*, we conclude that the 1996 Act creates a new jurisdictional regime outside of the current separations process. The unbundled loop charges paid by new entrants under section 251(c)(3) will therefore recover the unseparated cost of the loop, including the interstate component now recovered through the SLC. If end users or carriers purchasing access to

[772] *See infra*, Section VII. We also note that where new entrants purchase access to unbundled network elements to provide exchange access services, whether or not they are also offering toll services through such elements, the new entrants may assess exchange access charges to IXCs originating or terminating toll calls on those elements. In these circumstances, incumbent LECs may not assess exchange access charges to such IXCs because the new entrants, rather than the incumbents, will be providing exchange access services, and to allow otherwise would permit incumbent LECs to receive compensation in excess of network costs in violation of the pricing standard in section 252(d). *See* 47 U.S.C. § 252. We further note, however, that in these same circumstances the new entrant purchasing access to an unbundled switch element must pay to the incumbent LEC the charges included in the transitional mechanism, described *infra*, at Section VII, for a temporary period.

[773] *See infra*, Section VII, discussing an interim mechanism addressing near-term access charge bypass.

[774] As discussed at *infra*, Section VIII, a different result will occur when interconnecting carriers purchase LEC retail services at wholesale rates under section 251(c)(4).

local loops were required to pay the SLC in this situation, LECs would enjoy double recovery, and the effective price of unbundled loops would exceed the cost-based levels required under section 251(d)(1).

365. Finally, we have considered the economic impact on small incumbent LECs of our conclusion that carriers purchasing access to unbundled network elements to provide interexchange or exchange access services are not required to pay federal or state access charges, except as described in Section VII, *infra,* for a temporary period. For example, the Rural Telephone Coalition argues that rural ratepayers could be subject to higher local service rates if interexchange carriers are allowed to bypass access charges through the purchase of unbundled elements before proceedings regarding access reform and universal service are completed. We reject the Rural Telephone Coalition's argument, however, because our rules, as discussed in Section VII, *infra*, provide for a limited, transitional plan to address public policy concerns raised by the bypass of access charges through unbundled network elements.

J. Specific Unbundling Requirements

366. Having interpreted the standards set forth in the 1996 Act for the unbundling of network elements, we now apply those standards to incumbent LECs' networks. Based on the information developed in this proceeding, we require incumbent LECs to provide unbundled access to local loops, network interface devices, local and tandem switching capability, interoffice transmission facilities, signaling and call-related databases, operations support systems functions, and operator services and directory assistance facilities, as described below. These network elements represent a minimum set of elements that must be unbundled by incumbent LECs. State commissions, as previously noted, are free to prescribe additional elements, and parties may agree on different or additional network elements in the voluntary negotiation process.

1. Local Loops

a. Background

367. In the NPRM, we tentatively concluded that incumbent LECs should be required to unbundle local loops. We sought comment on appropriate requirements for loop unbundling that would promote entry and build upon existing state initiatives, and whether we should adopt specific provisioning requirements for loop unbundling. We also sought comment on our tentative conclusion that incumbent LECs should make available as individual network elements various subloop elements such as the feeder, distribution, and concentration equipment.

b. Comments

368. Virtually all parties that discuss local loop unbundling support the NPRM's tentative conclusion that the local loop is a network element that should be unbundled.[775] These commenters assert that unbundling local loops is consistent with congressional intent,[776] and that doing so is technically feasible.[777] In addition, a number of state commissions note that they already require incumbent LECs to unbundle local loops.[778] In support of loop unbundling, several commenters cite ongoing unbundled loop arrangements between incumbent LECs and competing providers.[779] MFS asserts that the local loop is the most formidable entry barrier to the local exchange market and has the strongest bottleneck characteristics of any network element.[780]

369. There is disagreement, however, over how the local loop should be defined. Some commenters recommend a definition that would encompass the basic loop facilities and

[775] *See, e.g.*, Bell Atlantic comments at 22; ACTA comments at 23; LCI comments at 17; Comcast comments at 20; Matanuska Tel. at 2; ACSI comments at 35; CompTel comments at 30; Illinois Commission comments at 39; U S West comments at 47; Ameritech comments at 36; District of Columbia Commission at 23; Time Warner comments at 44-45; ALTS comments at 26; TIA comments at 9; Sprint comments at 30; NCTA comments at 37; Matanuska Tel. comments at 2; *but see* GTE comments at 33 ("there is no evident need for FCC intervention. Several states are already addressing such matters . . . Moreover, because several carriers are already providing unbundled loops pursuant to state requirements, FCC action is not necessary to assure progress by states").

[776] *See, e.g.*, Hyperion comments at 18; District of Columbia Commission comments at 23; Ameritech comments at 35; NTIA reply at 9-10; SNET comments at 22-23; MFS comments at 42; ACSI comments at 35.

[777] *See, e.g.*, Citizens Utilities comments at 15; PacTel reply at 18; New York Commission comments at 26; SBA comments at 13-14; TIA comments at 9; Texas Commission comments at 9, 17; ACSI comments at 35; NYNEX comments at 64-65; MCI comments at 29; GTE reply at 18. AT&T, for example, asserts that tariffs filed by Ameritech, SNET, NYNEX, SBC, and Bell Atlantic permit the interconnection of a competitor's switch to the incumbent LEC's loop. Letter from Betsy Brady and Bruce Cox, AT&T, to Regina Keeney, Chief, Common Carrier Bureau, FCC, Mar. 21, 1996 (AT&T March 21 Letter) at 18.

[778] *See, e.g.*, Alabama Commission comments at 18; Texas Commission comments at 17; Arizona Commission comments, Exhibit V at 8; New York Commission comments at 26; Oklahoma Commission comments, Attachment A at 13; Iowa Commission comments, Attachment B at 4.

[779] *See, e.g.*, PacTel comments at 52 (noting that it has an agreement to provide MFS with unbundled loops); Ameritech comments at 36 (by the end of 1996, over 45,000 of its unbundled loops will be used by interconnecting carriers); Frontier comments at 14 (Rochester Telephone is currently providing unbundled loops pursuant to tariff.)

[780] MFS comments at 42; *accord* MCI comments at 29; IDCMA reply at 10; Ameritech comments at 35; MECA comments at 38; CompTel comments at 30; ALTS comments at 26.

would not attempt to delineate all loop technologies.[781] Parties that favor a broad definition of local loop suggest some variation on the following: the communications path between the main distribution frame (MDF) in the central office and the network interface device (NID) at the customer premises.[782] USTA, PacTel, and BellSouth contend that such a definition complies with the 1996 Act and allows private negotiations to address the specific network architectures of incumbent LECs and the needs of the particular requesting carriers.[783]

370. Other commenters support a definition of the local loop that would require incumbent LECs to provide, where facilities exist or can be upgraded, five categories of local loops: 2-wire voice-grade analog lines, 2-wire Integrated Services Digital Network (ISDN) lines, 2-wire High-Bit-Rate Digital Subscriber Lines (HDSL), 4-wire HDSL, and 4-wire DS-1 lines.[784] These parties argue that guidance from the Commission on specific loop categories will minimize complex and resource-intensive disputes between incumbent LECs and requesting carriers by avoiding disagreements over whether a particular loop functionality qualifies as a "loop."[785] ITIC contends that the ability of new entrants to provide various digital loop functions, in competition with the incumbent LEC, is likely to stimulate entry by small entities.[786]

371. Connecticut and Texas have established different definitions of unbundled local loop functionality. The Connecticut Department of Public Utility Control has ordered SNET to unbundle 2-wire voice-grade links, 2-wire ISDN links, and 4-wire DS-1 links.[787] The Texas Commission has a similar definition, but specifically excludes DS1, DS3, and fiber loops interfacing with SONET, which the Texas Commission notes can be purchased as

[781] USTA comments at 29; U S West comments at 47; Wyoming Commission comments at 24; PacTel comments at 52-53; BellSouth comments at 37 n.82; Sprint comments at 30.

[782] U S West comments at 47; Teleport comments at 35-36; MECA comments at 28; Ameritech comments at 36; NYNEX comments at 62 n.123; Frontier comments at 14; USTA comments at 29.

[783] USTA comments at 29; PacTel comments at 52-53; BellSouth comments at 37-38.

[784] MFS comments at 43-44; GST comments at 21-22; ALTS comments at 27; *but see* Bell Atlantic reply at 10 (HDSL links are actually subloop elements and should only be available through a bona fide request process).

[785] MFS comments at 42; GST comments at 20; Intermedia comments at 10.

[786] ITIC comments at 7-8.

[787] Connecticut Commission comments, Att. B at 2.

private line services.[788] Criticizing the approach taken by the Texas Commission, ACSI and Intermedia argue that DS1 and DS3-level loops, as well as analog voice and ISDN loops, should be considered unbundled loops.[789]

372. Potential local competitors contend that an incumbent LEC should be required to modify an existing loop when a requesting carrier seeks to provide a particular type of loop capability that is not technically feasible under the loop's existing architecture.[790] MFS notes that an incumbent LEC typically will take the steps necessary to provide a particular loop functionality, such as ISDN, to a customer when that customer's existing loop is incapable of supporting the requested functionality.[791] Therefore, MFS and GST propose that the loop types available to requesting carriers should match those made available by the incumbent LEC to end-user customers within the same geographic area.[792]

373. A number of potential local competitors request that the Commission adopt specific requirements governing loop unbundling. MFS and GST recommend adoption of a rule that would establish five minutes as the standard interruption interval during which a customer's loop is disconnected from the incumbent LEC's switch and reconnected to a competitor's switch.[793] Opposing MFS's proposed five-minute loop-cutover requirement, GTE argues that the process simply may take longer than five minutes, and that the cutover interval should be addressed through negotiations.[794] Intermedia and Teleport complain that incumbent LECs have abused their control over intra-office cables that connect unbundled loops to the competitor's collocated equipment, and they ask that the Commission prohibit such practices.[795] A number of potential local competitors request that the Commission specifically require incumbent LECs to provide unbundled loops even when the LEC uses an integrated

[788] Texas Commission comments at 17-18.

[789] ACSI comments, Attachment 1 at 2-3; Intermedia comments at 10.

[790] AT&T comments at 29-30; MFS comments at 43; ALTS comments at 27; GST comments at 21.

[791] MFS comments at 43.

[792] MFS comments at 44; *accord* NYNEX comments at 64.

[793] MFS comments at 45; GST comments at 22-23.

[794] GTE reply at 18-19, n.32.

[795] Intermedia comments at 8-9; Teleport comments at 36-37.

digital loop carrier (IDLC)[796] to deliver a particular loop to the central office. These parties argue that the incumbent LEC could either move the requested loop from the IDLC to another loop carrier, or could employ demultiplexing equipment at the central office.[797]

374. *Subloop unbundling.* Commenters disagree over the Commission's tentative conclusion to identify subloop components as individual network elements. Parties that support a national subloop unbundling requirement argue that subloop unbundling is technically feasible and will enhance competition by allowing a competitor to purchase from the incumbent only those loop facilities that it cannot provide itself.[798] These parties identify the feeder, distribution, and feeder/distribution interface as the appropriate subloop elements.[799] Some parties would add to those components the network interface device, which, in most states, is the demarcation point between incumbent LECs' outside plant and customers' inside wiring.[800] AT&T and MCI contend that the feeder, FDI, and distribution segments of the local loop perform different functions and are, therefore, logically separable.[801] ACSI asserts that, just as different loop architectures have not prevented states from unbundling local loops, different subloop architectures should not prevent subloop unbundling.[802] ITIC, ITAA and Compaq assert that subloop unbundling will facilitate the

[796] An IDLC carries aggregated loop traffic from the point of concentration in the LEC's loop facilities directly into the switch via a multiplexed circuit.

[797] MFS comments at 45-46 n.58; AT&T reply at 12; GST comments at 23; MCI reply at 30.

[798] LCI comments at 17; MCI comments at 16; ACSI comments at 38-39; TCC comments at 35-37; AT&T comments at 1; Telecommunications Resellers Ass'n comments at 34; *see also* ACSI reply at 17 (ACSI plans to deploy switches and fiber rings that would replace the incumbent LEC's feeder plant, but would still need access to the incumbent LEC's loop distribution and, occasionally, loop concentration and multiplexing functionality).

[799] *See, e.g.*, ACSI comments at 36-37 AT&T comments at 19; TIA comments at 11-12; Cable & Wireless comments at 19; ACTA comments at 19; IDCMA reply at 12-13. Other carriers seek access to digital loop carriers and analog cross-connects. MCI comments at 29; ACTA comments at 29; LCI comments at 17; TCC comments at 37.

[800] *See, e.g.*, MCI comments at 16; IDCMA reply at 12; ACTA comments at 19; GCI comments at 12; LDDS comments at 41-42; MFS comments at 43 n.54; TCC comments at 36; Telecommunications Resellers Ass'n comments at 33; LCI comments at 17.

[801] AT&T comments at 19; MCI comments at 16. According to MCI, the connection is made via a patch panel, where a competitor could easily interconnect its own feeder facilities.

[802] ACSI reply at 14.

provision of high capacity loop functions and lead to innovative new data services.[803] SBA contends that subloop unbundling will facilitate entry by small businesses by allowing them to begin competing in smaller markets, and by minimizing the number of unnecessary elements they would need to purchase.[804]

375. Incumbent LECs argue that subloop unbundling is not critical for potential competitors to enter the local exchange market.[805] Bell Atlantic and GTE note that the comments of parties considered to be potential beneficiaries of subloop unbundling, such as cable operators and CAPs, express little interest in obtaining subloop elements.[806] In addition, Bell Atlantic, Ameritech, and U S West claim that every state commission that has examined the possibility of requiring subloop unbundling has rejected it.[807] Ameritech notes that no competitor has used the bona fide request process that Illinois made available over a year ago for subloop unbundling requests.[808] Ameritech also points out that MFS did not demand subloop unbundling in its recent interconnection agreement with Ameritech.[809] Rural Telephone Coalition and GVNW contend that subloop unbundling could be particularly burdensome to smaller LECs whose networks were not designed for this type of access.[810]

[803] Letter from Colleen Boothby, Levine, Blaszak, Block & Boothby (on behalf of the Information Technology Industry Council's FCC Working Group), to William F. Caton, Secretary, FCC, July 16, 1996 (ITIC July 16 *Ex Parte*); Letter from Joseph Markoski, Squire, Sanders & Dempsey (on behalf of the Information Technology Association of America) to William F. Caton, Secretary, FCC, July 22, 1996 (ITAA July 19 *Ex Parte*), Letter from Robert Stearns, Senior Vice President, Compaq Computer Corporation, to Susan Ness, Commissioner, FCC, July 23, 1996 (Compaq July 23 *Ex Parte*), Letter from Dhruv Khanna, Senior Communications Attorney, Intel Corporation, to Reed Hundt, Chairman, FCC, July 25, 1996 (Intel July 25 *Ex Parte*).

[804] SBA comments at 14.

[805] *See, e.g.*, NYNEX reply at 30; Bell Atlantic reply at 10; Ameritech comments at 17; SBC reply at 21.

[806] Bell Atlantic reply at 10; GTE reply at 19-20.

[807] Bell Atlantic comments at 24; Ameritech reply at 14-15; U S West comments at 50 n.109.

[808] Ameritech comments at 38 n.62.

[809] Ameritech reply at 17.

[810] Rural Tel. Coalition comments at 32; GVNW comments at 26-27.

376. A majority of commenters, particularly incumbent LECs, argue that subloop unbundling is best addressed in the context of specific requests by competing carriers.[811] AT&T suggests that the Commission could declare that subloop elements are network elements under section 251(c)(3), but not require them to be tariffed until the incumbent LEC receives a request for such elements.[812] Incumbent LECs also argue that subloop unbundling raises significant technical issues, and explain in detail many of the complexities involved.[813] In addition, Sprint and several incumbent LECs maintain that subloop unbundling would raise difficult administrative questions, such as the tracking, pricing, billing, maintenance and repair of subelements.[814] Various parties assert that the costs to reengineer parts of the loop and develop operational support systems for subloop elements will raise the price of subloop elements to prohibitively high levels.[815]

c. Discussion

377. We conclude that incumbent LECs must provide local loops on an unbundled basis to requesting carriers. We note that the Joint Explanatory Statement lists local loops as an example of an unbundled network element.[816] As discussed below, the record demonstrates that it is technically feasible for incumbent LECs to provide access to unbundled local loops, and that such access is critical to encouraging market entry. Further, the competitive checklist

[811] Bell Atlantic comments at 22; Mass. Commission comments at 7; Cincinnati Bell reply at 7; NTIA reply at 10; GTE comments at 34; NYNEX comments at 67-68; Ameritech comments at 41-42; USTA comments at 32; BellSouth comments at 39 n.85; Sprint comments at 32; *see also* Ameritech reply at 17 (some types of subloop unbundling may be technically feasible but are difficult to identify in the absence of specific requests).

[812] AT&T reply at 17.

[813] Letter from Sandra Wagner, Director - Federal Regulatory, SBC Communications, to William F. Caton, Acting Secretary, FCC, June 4, 1996 (SBC June 4 *Ex Parte*); *see also* PacTel reply at 18 (access at the NID would require incumbent LECs to construct a separate NID for use by the requesting carrier to preserve network security and customer privacy); Ameritech reply at 19 (NID unbundling ignores function of "overvoltage protection" provided by NID).

[814] Sprint comments at 30-31; GTE comments at 33-34; NYNEX comments at 68-69; Bell Atlantic comments at 24; U S West comments at 50-51; BellSouth comments at 39; Ameritech comments at 41.

[815] GTE comments, Attachment 1 at 1; Sprint comments at 32; U S West reply at 25; NYNEX comments at 69; *see also* Ameritech comments, Attachment 1 at 4 (service activation cost for subloop elements would be 53 percent higher than for activation of an unbundled loop).

[816] Joint Explanatory Statement at 116.

contained in section 271 requires BOCs to offer unbundled loops separate from switching as a precondition to entry into the in-region, interLATA services market.[817]

378. Requiring incumbent LECs to make available unbundled local loops will facilitate market entry and improve consumer welfare. Without access to unbundled local loops, new entrants would need to invest immediately in duplicative facilities in order to compete for customers. Such investment and building would likely delay market entry and postpone the benefits of local telephone competition for consumers. Moreover, without access to unbundled loops, new entrants would be required to make a large initial sunk investment in loop facilities before they had a customer base large enough to justify such an expenditure.[818] This would increase the risk of entry and raise the new entrant's cost of capital. By contrast, the ability of a new entrant to purchase unbundled loops from the incumbent LEC allows the new entrant to build facilities gradually, and to deploy loops for its customers where it is efficient to do so. Moreover, in some areas, the most efficient means of providing competing service may be through the use of unbundled loops. In such cases, preventing access to unbundled loops would either discourage a potential competitor from entering the market in that area, thereby denying those consumers the benefits of competition, or cause the competitor to construct unnecessarily duplicative facilities, thereby misallocating societal resources.

379. Section 251(c)(3) requires incumbent LECs to provide access to unbundled elements "at any technically feasible point."[819] The vast majority of commenters, including incumbent LECs, agree with our tentative conclusion that it is technically feasible to provide access to unbundled local loops,[820] and a number of commenters identify the main distribution frame in a LEC central office as an appropriate access point.[821] Moreover, access to unbundled loops is currently provided by several LECs pursuant to state unbundling

[817] 47 U.S.C. § 271(c)(2)(B).

[818] As of year end 1995, Class A carriers reported $268 billion of total plant in service, of which $229 billion was classified as network plant. Local loop plant comprises approximately $109 billion of total plant in service, which represents 41 percent of total plant in service and 48 percent of network plant. *See* 1995 ARMIS Report 43-04.

[819] 47 U.S.C. § 251(c)(3).

[820] *See, e.g.*, PacTel reply at 18; New York Commission comments at 26; SBA comments at 13-14; TIA comments at 9; GTE reply at 18; NYNEX comments at 64-65.

[821] *See, e.g.*, Bell Atlantic comments, Albers Attachment at 6-8; Ameritech comments at 36.

requirements.[822] Thus, we conclude that it is technically feasible for incumbent LECs to provide access to unbundled local loops at, for example, a central office distribution frame.

380. We further conclude that the local loop element should be defined as a transmission facility between a distribution frame, or its equivalent, in an incumbent LEC central office, and the network interface device at the customer premises. This definition includes, for example, two-wire and four-wire analog voice-grade loops, and two-wire and four-wire loops that are conditioned to transmit the digital signals needed to provide services such as ISDN, ADSL, HDSL, and DS1-level signals.[823] We note that a number of parties proposed definitions of the local loop that encompassed some or all of these loop types.[824] In addition, we agree with ITIC that the ability to offer various digital loop functions in competition with incumbent LECs may be particularly beneficial to small entities by allowing them to serve niche markets.[825]

381. Incumbent LECs are required to provide access to these transmission facilities only to the extent technically feasible. That is, if it is not technically feasible to condition a loop facility to support a particular functionality, the incumbent LEC need not provide unbundled access to that loop so conditioned. For example, a local loop that exceeds the maximum length allowable for the provision of a high-bit-rate digital service could not feasibly be conditioned for such service.[826] Such a situation may necessitate a request for subloop elements.[827] Nevertheless, section 251(c)(3) does not limit the types of

[822] *See, e.g.*, Ameritech comments at 36 (by the end of 1996, over 45,000 of its unbundled loops will be used by interconnecting carriers); Frontier comments at 14 (Rochester Telephone is currently providing unbundled loops pursuant to tariff); *see also* Alabama Commission Comments at 18; Texas Commission comments at 17; New York Commission comments at 26; Arizona Commission comments, Exh. V at 8.

[823] ISDN (Integrated Services Digital Network) at the Basic Rate Interface level permits the transmission of digital signals over the loop at the rate of 144 kbps, which provides two standard 64 kbps voice or data channels and a 16 kbps data channel. ISDN at the Primary Rate Interface permits 23 standard 64 kbps channels plus one 16 kbps data channel. ADSL (Asynchronous Digital Subscriber Line) is a transmission path that facilitates 6 Mbps digital signal downstream and 640 kbps digital signal upstream, while simultaneously carrying an analog voice signal. Two-wire HDSL (High-bit-rate Digital Subscriber Line) permits the transmission of a 768 kbps digital signal over a copper loop, while four-wire HDSL allows the transmission of 1.544 Mbps over two two-wire pairs.

[824] *See, e.g.*, MFS comments at 43-44; ALTS comments at 27; GST comments at 21-22; ACSI comments, Att. 1 at 2.

[825] ITIC comments at 7-8.

[826] Such loop conditioning may involve removing load coils or bridged taps that interfere with the transmission of digital signals.

[827] *See, e.g.*, Bell Atlantic reply at 10 n.11.

telecommunications services that competitors may provide over unbundled elements to those offered by the incumbent LEC.

382. Our definition of loops will in some instances require the incumbent LEC to take affirmative steps to condition existing loop facilities to enable requesting carriers to provide services not currently provided over such facilities. For example, if a competitor seeks to provide a digital loop functionality, such as ADSL, and the loop is not currently conditioned to carry digital signals, but it is technically feasible to condition the facility, the incumbent LEC must condition the loop to permit the transmission of digital signals. Thus, we reject BellSouth's position that requesting carriers "take the LEC networks as they find them" with respect to unbundled network elements.[828] As discussed above, some modification of incumbent LEC facilities, such as loop conditioning, is encompassed within the duty imposed by section 251(c)(3).[829] The requesting carrier would, however, bear the cost of compensating the incumbent LEC for such conditioning.[830]

383. We further conclude that incumbent LECs must provide competitors with access to unbundled loops regardless of whether the incumbent LEC uses integrated digital loop carrier technology, or similar remote concentration devices, for the particular loop sought by the competitor. IDLC technology allows a carrier to aggregate and multiplex loop traffic at a remote concentration point and to deliver that multiplexed traffic directly into the switch without first demultiplexing the individual loops. If we did not require incumbent LECs to unbundle IDLC-delivered loops, end users served by such technologies would not have the same choice of competing providers as end users served by other loop types. Further, such an exception would encourage incumbent LECs to "hide" loops from competitors through the use of IDLC technology.

384. We find that it is technically feasible to unbundle IDLC-delivered loops. One way to unbundle an individual loop from an IDLC is to use a demultiplexer to separate the unbundled loop(s) prior to connecting the remaining loops to the switch. Commenters identify a number of other methods for separating out individual loops from IDLC facilities,

[828] BellSouth comments at 39.

[829] *See supra* Section IV.D., interpreting the term "technically feasible." *See also* MFS comments at 43 (arguing that incumbent LECs condition loops in order to provide particular digital loop functionalities to their customers).

[830] *See supra* Section VII, discussing the recovery of costs under section 252(d)(1).

including methods that do not require demultiplexing.[831] Again, the costs associated with these mechanisms will be recovered from requesting carriers.

385. We decline to define a loop element in functional terms, rather than in terms of the facility itself. Some parties advocate defining a loop element as merely a functional piece of a shared facility, similar to capacity purchased on a shared transport trunk.[832] According to these parties, this definition would enable an IXC to purchase a loop element solely for purposes of providing interexchange service. While such a definition, based on the types of traffic provided over a facility, may allow for the separation of costs for a facility dedicated to one end user, we conclude that such treatment is inappropriate. Giving competing providers exclusive control over network facilities dedicated to particular end users provides such carriers the maximum flexibility to offer new services to such end users. In contrast, a definition of a loop element that allows simultaneous access to the loop facility would preclude the provision of certain services in favor of others. For example, carriers wishing to provide solely voice-grade service over a loop would preclude another carrier's provision of a digital service, such as ISDN or ADSL, over that same loop.[833] We note that these two types of services could be provided by different carriers over, for example, separate two-wire loop elements to the same end user.

386. Incumbent LECs must provide cross-connect facilities, for example, between an unbundled loop and a requesting carrier's collocated equipment, in order to provide access to that loop. As we conclude in section IV.D, above, an incumbent LEC must take the steps necessary to allow a competitor to combine its own facilities with the incumbent LEC's unbundled network elements. We highlight this requirement for unbundled loops because of allegations by competitive providers that incumbent LECs have imposed unreasonable rates, terms, and conditions for such cross-connect facilities in the past.[834] Incumbent LECs may recover the cost of providing such facilities in accordance with our rules on the costs of interconnection and unbundling. Charges for all such facilities must meet the cost-based standard provided in section 252(d)(1), and the terms and conditions of providing these facilities must be reasonable and nondiscriminatory under section 251(c)(3).

[831] Under more recent standards for IDLC facilities, a competitor's loop traffic could be separated from the incumbent LEC's loop traffic without the use of multiplexers. *See, e.g.*, MCI comments at 30 (IDLC loops can be moved onto other loop carrier links, or alternatively, can be removed from the mulitiplexed signal through "hair pinning").

[832] *See, e.g.*, Cable & Wireless comments at 26-27; ACTA comments at 17.

[833] Digital services such as ISDN and ADSL occupy the same frequency spectrum on a loop as ordinary voice-grade services.

[834] Intermedia comments at 8-9; Teleport comments at 36-37.

387. At this time, we decline to adopt additional terms and conditions, such as the five-minute loop cutover requirement proposed by MFS, for loop provisioning. We agree with commenters who contend that the provisioning of unbundled local loops must be subject to close scrutiny to ensure that incumbent LECs do not delay loop cutover or otherwise complicate the acquisition of loops by a competitor. We conclude, however, that the rules we adopt in the Access to Unbundled Network Elements section that require nondiscriminatory terms and conditions for provisioning, billing, testing, and repair of unbundled elements, and the availability of electronic ordering systems, adequately address these concerns. We will continue to review and revise our rules in this area as necessary.

388. Section 251(d)(2)(A) requires the Commission to consider whether "access to such network elements as are proprietary in nature is necessary."[835] Most parties did not identify any proprietary concerns associated with providing unbundled access to local loops. Ericsson notes that some "active" loop equipment, such as channel banks and remote terminal equipment, is often proprietary in nature, and that manufacturers would require time to modify such equipment to create end-to-end network compatibility on a national basis.[836] Ericsson does not contend, however, that any proprietary information would be revealed if loops using such equipment were unbundled, or that use of such equipment should prevent loop unbundling in general.[837] Thus, we conclude that loop elements are, in general, not proprietary in nature under our interpretation of section 251(d)(2)(A). Even if loop elements were proprietary in nature, however, Ericsson does not meet the second consideration in our section 251(d)(2)(A) standard, which requires a showing that a new entrant can offer the proposed telecommunications service through the use of other, nonproprietary elements in the incumbent LEC's network.[838] Ericsson merely contends that manufacturers may need time to establish compatibility between its proprietary equipment and equipment of other manufacturers.[839] Therefore, we find that Ericsson's concerns do not justify withholding unbundled loops from requesting carriers pursuant to section 251(d)(2)(A).

389. Section 251(d)(2)(B) directs the Commission to consider whether "the failure to provide access to such network elements would impair the ability of the telecommunications

[835] 47 U.S.C. § 251(d)(2)(A).

[836] Ericsson comments at 4.

[837] Ericsson's comments were in response to a question in the NPRM seeking comment on the need to accommodate new loop technologies or services. Ericsson comments at 4.

[838] *See supra* Section V.E.3.

[839] Ericsson comments at 4-5.

carrier seeking access to provide the services that it seeks to offer."[840] We have interpreted the term "impair" to mean either increased cost or decreased service quality that would result from using network elements of the incumbent LEC other than the one sought.[841] Commenters do not identify alternative facilities that would fulfill requesting carriers' need for transmission between the central office and the customer premises at the same cost and same quality of service. Accordingly, we conclude that competitors' ability to provide telephone exchange, exchange access, or other telecommunications services would be significantly impaired if they did not have the opportunity to purchase unbundled loops from incumbent LECs.

390. As a general matter, we believe that subloop unbundling could give competitors flexibility in deploying some portions of loop facilities, while relying on the incumbent LEC's facilities where convenient. For example, a competitor may seek to minimize its reliance on the LEC's facilities by combining its own feeder plant with the incumbent LEC's distribution plant.[842] In addition, some high bandwidth services, such as ADSL, cannot be provided over long loop lengths. ITIC, Compaq, and Intel assert that subloop unbundling would lead to innovative new data services.[843] In these situations, carriers would need access at points along the loop closer to the customer premises. The record presents evidence primarily of logistical, rather than technical, impediments to subloop unbundling.[844] Several LECs and USTA, for example, assert that incumbent LECs would need to create databases for identifying, provisioning, and billing for subloop elements.[845] Further, incumbent LECs argue that there is

[840] 47 U.S.C. § 251(d)(2)(B).

[841] *See supra* Section V.E.3.

[842] Subloop unbundling could have network efficiency advantages as well. One party notes that subloop unbundling could allow packetized data traffic to be shifted to a data network, rather than flowing through the circuit-switched network portions of the public switched network. *See* ITIC July 16 *Ex Parte*.

[843] ITIC July 16 *Ex Parte*, ITAA July 22 *Ex Parte*, Compaq July 23 *Ex Parte*, Intel July 25 *Ex Parte*. ITAA contends that subloop unbundling would allow data and other traffic to be routed before it reaches an incumbent LEC's central office switch. According to ITAA, such routing would moot incumbent LECs' argument that traffic from the Internet and other on-line services is negatively impacting their switches. ITAA July 19 *Ex Parte*.

[844] *See, e.g.*, Sprint comments at 30-31; GTE comments at 33-34; NYNEX comments at 68-69; Bell Atlantic comments at 24 (all discussing a variety of tracking, billing, and maintenance issues that would be raised by subloop unbundling).

[845] USTA comments at 31; NYNEX comments at 69; Ameritech comments at 41; BellSouth comments at 39; U S West comments at 50.

insufficient space at certain possible subloop interconnection points.[846] We note that these concerns do not represent "technical" considerations under our interpretation of the term "technically feasible."[847]

391. Nonetheless, we decline at this time to identify the feeder, feeder/distribution interface (FDI), and distribution components of the loop as individual network elements. We find that proponents of subloop unbundling do not address certain technical issues raised by incumbent LECs concerning subloop unbundling. Incumbent LECs contend that access by a competitor's personnel to loop equipment necessary to provide subloop elements, such as the FDI, raise network reliability concerns for customers served through that FDI.[848] SBC, for example, asserts that access to its loop concentration points by competitors would increase the risk of error by a competitor's technicians that may disrupt service to customers of one or both carriers.[849] U S West contends that the potential for poor technical implementation of subloop interconnection and the lack of overall responsibility for loop performance is very likely to degrade overall service quality.[850] Proponents of subloop unbundling do not adequately respond to these arguments by incumbent LECs. As discussed above, we have determined that we must take into account specific, demonstrable claims regarding network reliability in determining whether to identify any particular component as an element that must be unbundled. Therefore, we believe that, at this stage, based on the current record evidence, the technical feasibility of subloop unbundling is best addressed at the state level on a case-by-case basis at this time.[851] Information developed by the parties in the context of a specific request for subloop unbundling will provide a useful framework for addressing the loop maintenance and network reliability matters that we have identified. Based on actions taken by the states or other future developments, and on the importance of subloop unbundling in light of technological advancements, we intend to revisit the specific issue of subloop unbundling sometime in 1997.

[846] Bell Atlantic comments at 24; SBC comments at 38; NYNEX comments at 66.

[847] *See supra* Section IV.D.

[848] BellSouth comments at 39; NYNEX comments at 66; SBC comments at 39; U S West comments at 52 n.113; PacTel comments at 18.

[849] SBC comments at 39.

[850] U S West comments at 52 n.113.

[851] We encourage states to pursue subloop unbundling in response to requests for subloop elements by competing providers.

392. We require incumbent LECs to offer unbundled access to the network interface device (NID),[852] as a network element, as described below. When a competitor deploys its own loops, the competitor must be able to connect its loops to customers' inside wiring in order to provide competing service, especially in multi-tenant buildings. In many cases, inside wiring is connected to the incumbent LEC's loop plant at the NID. In order to provide service, a competitor must have access to this facility. Therefore, we conclude that a requesting carrier is entitled to connect its loops, via its own NID, to the incumbent LEC's NID.[853]

393. Pursuant to section 251(c)(3), we find that this arrangement clearly is technically feasible. Ameritech notes that it currently maintains such connections with competitors that have deployed their own loop facilities.[854] This is persuasive evidence that unbundled access at the NID, in this manner, does not raise network reliability concerns. Under section 251(d)(2)(A), the record contains no evidence of proprietary concerns with unbundled access to the NID. In addition, under our interpretation of the "impair" test of section 251(d)(2)(B), commenters do not contend that new entrants could obtain the same functionality at the same cost and service quality through other network elements of the incumbent LEC. Moreover, the record indicates that certain network architectures used by new entrants, such as fiber rings, can most efficiently connect end users to the new entrant's switching office without use of the incumbent LEC's facilities.[855] Thus, we conclude that the unavailability of access to incumbent LECs' NIDs would impair the ability of carriers deploying their own loops to provide service. Further, we believe that unbundled access to the NID will facilitate entry strategies premised on the deployment of loops. As discussed in section VII, above, the new entrant bears the costs of connecting its NID to the incumbent LEC's NID.

394. We do not require an incumbent LEC to permit a new entrant to connect its loops directly to the incumbent LEC's NID. MCI contends that directly connecting its loops to incumbent LECs' NIDs is "[t]he only practical solution" for gaining access to inside

[852] The NID is a cross-connect device used to connect loop facilities to inside wiring.

[853] We emphasize that access to inside wiring through the incumbent LEC's NID does not entitle a competitor to deliver its loop facilities into a building without the permission of the building owner. Similarly, access to an incumbent LEC's NID does not entitle the competitor to the riser and lateral cables between the NID and individual units within the building, which may be owned or controlled, for example, by the premises owner.

[854] Letter from James K. Smith, Director-Federal Relations, Ameritech, to William F. Caton, Acting Secretary, FCC, July 15, 1996 (Ameritech July 15 *Ex Parte*).

[855] Letter from Don Sussman, MCI, to William F. Caton, FCC, July 12, 1996 (MCI July 12 *Ex Parte*).

wiring.[856] According to MCI, there is no extra wiring to connect the incumbent LEC's NID to the new entrant's NID.[857] Ameritech demonstrates, however, that it currently provides access to inside wiring through the type of arrangement that MCI asserts is not practical -- that is, by connecting a new entrant's loops to inside wiring via the new entrant's NID and Ameritech's NID. MCI does not demonstrate that its ability to provide competing service is unreasonably limited by the arrangements explained by Ameritech.

395. The record contains conflicting evidence on the technical feasibility of requiring incumbent LECs to permit competitors to connect their loops directly to incumbent LECs' NIDs. Ameritech asserts that such a direct connection would leave Ameritech's unused loops without overvoltage protection.[858] MCI argues that overvoltage protection is provided through the incumbent LEC's "protector module" that is separate from the NID.[859] Ameritech responds that its NIDs are integrated units providing both overvoltage protection and a demarcation point, and that these two functions of the NID are "inseverable."[860] AT&T contends direct access to incumbent LECs NIDs is technically feasible. According to AT&T, if a competitor connects its loops directly to the incumbent LEC's NID, the incumbent LEC's loops remain connected to the grounding equipment that protects against overvoltage.[861] According to AT&T, when the competitor does not use spare terminals on the NID, the competitor would be required to ground the incumbent LEC's unused loops to protect against overvoltage.[862]

396. We find that the record in this proceeding does not permit a determination on the technical feasibility of the direct connection of a competitor's loops to the incumbent LEC's NID. Our requirement of a NID-to-NID connection addresses the most critical need of competitors that deploy their own loops -- obtaining access to the inside wiring of the

[856] MCI July 12 *Ex Parte* at 6.

[857] *Id.* at 5.

[858] Ameritech July 15 *Ex Parte* at 5.

[859] Letter from Donald Evans, Vice President - Federal Regulatory Affairs, MCI, to William F. Caton, Secretary, FCC, July 16, 1995 (MCI July 16 *Ex Parte*).

[860] Letter from James Smith, Director-Federal Relations, Ameritech, to William F. Caton, Acting Secretary, FCC, July 24, 1996 (Ameritech July 24 *Ex Parte*).

[861] Letter from Bruce Cox, Government Affairs Director, AT&T, to William F. Caton, Acting Secretary, FCC, July 18, 1996 (AT&T July 18 *Ex Parte*).

[862] *Id.*

building. We recognize, however, that competitors may benefit by directly connecting their loops to the incumbent LEC's NID, for example, by avoiding the cost of deploying NIDs.[863] States should determine whether direct connection to the NID can be achieved in a technically feasible manner in the context of specific requests by competitors for direct access to incumbent LECs' NIDs.[864]

2. Switching Capability

a. Background

397. In the NPRM, we tentatively concluded that incumbent LECs should be required to make available local switching capability as an unbundled network element. We sought comment on how a local switching element should be defined, and we identified two possible models: the switch "platform" approach, which would entitle and require a requesting carrier to purchase all of the features and functions of the switch on a per-line basis and the port approach used by the New York Commission, which offers local switching capability through the purchase of a port at a retail rate. We also sought comment on other definitions of a local switching element. In addition, we requested that commenters address whether vertical switching functions, such as those enabling the provision of custom local area signaling service (CLASS) features and call waiting, should be considered individual network elements separate from the basic switching functionality.

b. Comments

398. The vast majority of commenters support the Commission's tentative conclusion that local switching should be an unbundled network element.[865] Such parties note that the section 271 competitive checklist includes unbundled local switching and the legislative history of the 1996 Act identifies local switching as a possible element.[866] Several potential

[863] *Id.* at 1.

[864] Ameritech July 15 *Ex Parte* at 5-6.

[865] *See, e.g.*, GCI comments at 12; TIA comments at 11-12; Citizens Utilities comments at 15; Intermedia comments at 13; Bay Springs, *et al.* comments at 18; Wyoming Commission comments at 22.

[866] *See, e.g.*, Ameritech comments at 43; LDDS comments at 44; USTA comments at 32; BellSouth comments at 40.

local competitors contend that unbundled local switching functionality is very important to promote entry into the local exchange market.[867]

399. Some incumbent LECs support a definition of local switching as a switching port.[868] These LECs favor a definition of a port that focuses on *providing access* to additional switching features, rather than on the switching features themselves.[869] PacTel, for example, asserts that a port provides dialtone and a telephone number, but does not include local usage or vertical features such as custom calling.[870] Bell Atlantic contends that the 1996 Act requires incumbent LECs to *provide access* to unbundled network elements, and that a switch port meets this directive by providing access to the switch.[871]

400. Sprint, USTA, SBC, NYNEX, and MECA, on the other hand, favor a definition of the unbundled local switching element that includes the basic function of connecting network access lines to other lines or trunks.[872] These parties would expressly exclude from this local switching definition vertical features such as custom calling.[873] Sprint and SBC argue that vertical features are retail services offered to end users today, and therefore, must be purchased by the competitor under the wholesale rate provisions of the Act.[874] USTA

[867] LDDS reply at 18; TIA comments at 18; AT&T March 21 Letter 18 at 17-18; *but see* SBC reply at 23 ("Given that 'high margin' services are made possible through the switch, new entrants will likely purchase their own switching facilities.").

[868] BellSouth comments at 41; Cincinnati Bell comments at 18; U S West comments at 54-55; Bell Atlantic comments at 25; GTE comments at 37.

[869] BellSouth comments at 41; Cincinnati Bell comments at 18; USTA comments at 33; U S West comments at 54-55; Bell Atlantic comments at 25; GTE comments at 37; NYNEX comments at 69-70.

[870] PacTel comments at 55 (local usage should be excluded from the definition of a port because it is a tariffed service and should therefore be available to requesting carriers only through resale); *see also* SBC comments at 43 (the port should be separate from the switch).

[871] Bell Atlantic reply at 12.

[872] Sprint comments at 34; USTA reply at 16-17; SBC reply at 20; NYNEX reply at 31; MECA comments at 29.

[873] Sprint comments at 36; USTA reply at 16; SBC reply at 20; MECA comments at 29. Examples of vertical features include call waiting and three-way calling, which are custom calling features, and caller ID and call forwarding, which are custom local area signaling service (CLASS) features that rely on the transmission of signaling information between the calling and called parties.

[874] USTA reply at 16-17; PacTel reply at 19; SBC reply at 21; *see also* Sprint comments at 37-38 (although it is not technically feasible to unbundle vertical services, the costs of such services can be identified and should be excluded from the charge for the local switching element).

suggests that this approach best comports with the Act and is a reasonable compromise between the more limited port approach and the switching platform proposal.[875]

401. A number of commenters support a definition of the local switch that has been referred to as the "local switching platform."[876] These parties recommend defining the local switching element as encompassing all functions performed by the local switch, including basic switching functionality and vertical features.[877] Supporters of the switching platform approach contend that, because the requesting carrier would pay for all local switching functionality on a per-line basis, it would have the incentive and ability to combine features and services more effectively than it would under more limited definitions of the local switching element.[878]

402. LDDS and AT&T argue that the switch platform approach is more consistent with the Act than the port approach. These carriers argue that, under the port approach, local switching has not been "unbundled" because a competitor cannot combine a port with loop and trunking facilities to provide telephone service. Instead, the competitor must also purchase basic switching functionality from the incumbent LEC at wholesale rates.[879] According to AT&T and LDDS, the switching platform does not raise technical feasibility problems because requesting carriers would not have direct access to the switching hardware or software. Instead, the requesting carrier would "designate" the features to be associated with its own lines and the routing of its customers' calls, and the incumbent LEC would actually perform that function.[880]

[875] USTA reply at 16.

[876] MCI comments at 30-32; AT&T comments at 20-21; LDDS comments at 44-46; Texas Commission reply at 8; TCC comments at 37-38; ACTA comments at 18-20; ACSI comments at 40-41; CompTel comments at 33-35; Ad Hoc Telecommunications Users Committee reply at 8.

[877] Functions listed by proponents of the switch platform include local usage, exchange access, access to operators, announcements, recognition of customer requests for service, obtaining call-specific information, data analysis, selection of traffic routes, call signaling, recording for billing and network management, tests required for network maintenance and call processing, custom calling features (*e.g.* call forwarding, call waiting), and CLASS features (*e.g.* caller ID, call return). LDDS comments at 44; ACSI comments at 40-41; MCI comments at 30. AT&T and LDDS also propose to include in the local switching definition Centrex, carrier identification code determination, and access to databases and adjunct processors for the purpose of offering advanced intelligent network (AIN) services. LDDS comments at 45; AT&T Mar. 21 Letter at 18.

[878] LDDS comments at 45; AT&T comments at 21.

[879] LDDS comments at 55; AT&T reply at 18. The Texas Commission notes that Ameritech's unbundled port tariffs in Illinois expressly exclude basic switching functionality. Texas Commission comments at 13-14.

[880] AT&T reply at 19; LDDS reply at 19.

403. Opponents of the local switching platform assert that implementing a switch platform would cause technical problems. U S West and GVNW argue that the only technically feasible way to implement the switching platform would be physically to partition the switch which, according to U S West, would greatly reduce the switch's efficiency.[881] AT&T characterizes this argument as frivolous and asserts that physical partitioning of the switch has not been proposed by any party.[882] NYNEX contends that incumbent LECs would need to add capacity to their switches to accommodate competitors' demand for switch platforms.[883] AT&T responds that, because the requesting carrier is likely to be serving former customers of the incumbent LEC, the switching resources needed by the incumbent and competitor, at least initially, are likely to balance out.[884] GTE, U S West, and USTA also argue that the switching platform approach would discourage incumbent LECs from upgrading their switches because all new features would be immediately available to competitors at a discounted rate.[885]

404. Incumbent LECs argue that the switch platform would allow a requesting carrier to circumvent the statutory scheme that requires incumbent LECs to offer local exchange service at wholesale rates for resale by requesting carriers.[886] These commenters also contend that vertical features, such as custom calling and call waiting, are retail services, not network elements, and should be obtained by requesting carriers pursuant to section 251(c)(4).[887] Ad Hoc Telecommunications Users maintains that the switch platform approach raises entry costs by forcing competitive providers to purchase switching functions they may never need or use.[888] MCI and TCC contend that the local switching element should specifically include vertical features such as CLASS features and custom calling because incumbent LECs do not

[881] U S West comments at 55.

[882] AT&T reply at 19.

[883] NYNEX reply at 32.

[884] Letter from Bruce Cox, Government Affairs Director, AT&T, to William Caton, Secretary, FCC, June 28, 1996 (AT&T June 28 *Ex Parte*).

[885] GTE comments at 38; SBC comments at 43; USTA reply at 17.

[886] PacTel comments at 54; Bell Atlantic comments at 26; GTE reply at 20; *see also* Sprint comments at 38 (the local switching platform does not create incentives for competitors to build out facilities).

[887] USTA comments at 34-35; Cincinnati Bell comments at 18.

[888] Ad Hoc Telecommunications Users Committee comments at 23.

incur the costs for these services on a usage basis.[889] ACSI and LCI also support the availability of vertical switching functionalities on an unbundled basis.[890]

405. Incumbent LECs contend that the switch platform approach is impractical because standard measures of switching, such as the number of line or trunk terminations, would not capture the dynamic nature of switching.[891] In response, MCI and LDDS state that a requesting carrier would commit to purchasing a minimum level of trunk port capacity and a minimum level of busy hour switch capacity for at least one year.[892] Several BOCs and Sprint contend that the Commission should not adopt the switch platform because there is insufficient understanding of what it would entail.[893]

406. Most parties support the Commission's proposal to require incumbent LECs to unbundle tandem switching as a network element.[894] AT&T notes that the availability of unbundled tandem switches is critical to the connection of its own switches to incumbent LECs' switches.[895] AT&T argues that unbundled tandem switching is technically feasible because IXCs currently interconnect with incumbent LECs' tandem switches through standard specifications.[896] Other commenters indicate that tandem switching is available today through access tariffs, and therefore it is unnecessary for the Commission to unbundle tandem switching.[897] SBC states that the Commission should not apply the same unbundling

[889] MCI comments at 31; TCC comments at 31.

[890] ACSI comments at 41; LCI comments at 18.

[891] USTA comments at 34; MECA comments at 30.

[892] MCI comments at 30; LDDS comments at 44-45.

[893] Ameritech comments at 45; SBC comments at 42; Bell Atlantic reply at 11; Sprint comments at 39; NYNEX reply at 31.

[894] *See, e.g.*, AT&T comments at 22; New York Commission comments at 27; U S West comments at 48; MCI comments at 17; Competition Policy Institute comments at 16; GST comments at 24; TIA comments at 13.

[895] AT&T Mar. 21 Letter at 21.

[896] AT&T comments at 22; ALTS comments at 30.

[897] Bell Atlantic comments at 27; TIA comments at 13.

requirements for tandem and end office switches because tandem switches only offer trunk interfaces and do not contain switching features on a per-line basis.[898]

407. AT&T, MCI, and TCC also ask that the local switching element be defined to include data switching by packet switches.[899] MCI asserts that it is technically feasible for the requesting carrier's own facilities to interface with an incumbent LEC's packet switch through a connection at a DS1 frame or patch panel.[900] PacTel supports the unbundling of data switches as network elements.[901]

408. Several potential local competitors argue that the Commission should require incumbent LECs, in providing unbundled local switching, to enable requesting carriers to designate the trunk assignment for its local exchange customers.[902] CompTel states that this would maximize competitors' ability to create new services.[903] PacTel argues that it is not technically feasible to route local calls originating on unbundled loops onto particular outgoing trunks connected to that switch.[904]

409. ALTS argues that incumbent LECs should be required to make local switching available so that all signaling information necessary to complete a call is passed to the connecting carrier, such as an IXC or a competing provider.[905] The Wyoming Commission is considering adoption of a rule that would require incumbent LECs to pass on signaling

[898] SBC comments at 34 n.67.

[899] AT&T comments at 20; TCC comments at 39; MCI comments at 18.

[900] MCI comments at 18.

[901] PacTel reply at 21.

[902] ALTS comments, Attachment A at 20-21; LCI comments at 18; TCC reply at 17; *see also* CompTel comments at 34 (the Commission should enable requesting carriers to establish routing parameters for the following categories of traffic: domestic interLATA, presubscribed intraLATA, non-presubscribed intraLATA, 800/888, 900, interLATA operator traffic, intraLATA/0-/0+ operator traffic, and international direct dialed).

[903] CompTel comments at 34.

[904] PacTel reply at 20.

[905] ALTS comments at 29 (claiming that some carriers strip certain signaling information and end offices and tandem offices, thereby undermining the ability of new entrants to receive and aggregate traffic for various IXCs).

information to interconnected carriers, and would also prohibit incumbent LECs from claiming a proprietary right to signaling protocols.[906]

c. Discussion

(1) Local Switching Capability

410. We conclude that incumbent LECs must provide local switching as an unbundled network element. The record supports a finding that it is technically feasible for incumbent LECs to provide access to an unbundled local switching element, and that denying access to a local switching element would substantially impair the ability of many competing carriers to provide switched telecommunications services. We also note that section 271 requires BOCs to offer or provide "[l]ocal switching unbundled from transport, local loop transmission, or other services" as a precondition to providing in-region interLATA services.[907] As discussed below, we identify a local switching element that includes the basic function of connecting lines and trunks as well as vertical switching features, such as custom calling and CLASS features.[908] We agree with the Illinois Commission that defining the switching element in this way will permit competitors to compete more effectively by designing new packages and pricing plans.[909]

411. In the United States, there are over 23,000 central office switches, the vast majority of which are operated by incumbent LECs.[910] It is unlikely that consumers would receive the benefits of competition quickly if new entrants were required to replicate even a small percentage of incumbent LECs' existing switches prior to entering the market. The Illinois Commission staff presented evidence in a recent proceeding indicating that it takes

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[906] Wyoming Commission comments at 24.

[907] 47 U.S.C. § 271(c)(2)(B)(vi).

[908] Custom calling features, such as call waiting, three-way calling, and call forwarding, are switch-based calling functions. CLASS features, such as caller ID, are number translation services that are based on the availability of interoffice signaling.

[909] *AT&T Communications of Illinois, Petition for a Total Local Exchange Wholesale Service Tariff from Illinois Bell Telephone Company Pursuant to Section 13-505.5 of the Illinois Public Utilities Act*, Order, Docket Nos. 95-0458 and 95-0531, June 26, 1996 (Illinois Wholesale Order) at 63-66.

[910] *Statistics of Communications Common Carriers*, Federal Communications Commission, 1994/1995 Edition, at Table 2.4. This figure is derived from carriers filing with the FCC, which represent approximately 92 percent of the industry.

between nine months and two years for a carrier to purchase and install a switch.[911] We find this to be persuasive evidence of the entry barrier that would be created if new entrants were unable to obtain unbundled local switching from the incumbent LEC. The ability to purchase unbundled switching will also promote competition in an area until the new entrant has built up a sufficient customer base to justify investing in its own switch. We expect that the availability of unbundled local switching is likely to increase the number of carriers that will successfully enter the market, and thus should accelerate the development of local competition.

412. We define the local switching element to encompass line-side and trunk-side facilities plus the features, functions, and capabilities of the switch.[912] The line-side facilities include the connection between a loop termination at, for example, a main distribution frame (MDF), and a switch line card.[913] Trunk-side facilities include the connection between, for example, trunk termination at a trunk-side cross-connect panel and a trunk card. The "features, functions, and capabilities" of the local switch include the basic switching function of connecting lines to lines, lines to trunks, trunks to lines, trunks to trunks. It also includes the same basic capabilities that are available to the incumbent LEC's customers, such as a telephone number, directory listing, dial tone, signaling, and access to 911, operator services, and directory assistance.[914] In addition, the local switching element includes all vertical features that the switch is capable of providing, including custom calling, CLASS features, and Centrex, as well as any technically feasible customized routing functions. Thus, when a requesting carrier purchases the unbundled local switching element, it obtains all switching features in a single element on a per-line basis. A requesting carrier will deploy individual vertical features on its customers' lines by designating, via an electronic ordering interface, which features the incumbent LEC is to activate for particular customer lines.

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[911] Supplemental Rebuttal Testimony of Jake Jennings, Office of Policy and Planning, Illinois Commerce Commission, ICC Staff Ex. 1.04, Docket No. 95-0458, at 11-12 (Mar. 11, 1996).

[912] The NPRM used the terms "switch platform" and "port," as they had been developed by the Illinois and New York Commissions, respectively, to describe two possible approaches to establishing an unbundled local switching element. Parties commenting on the unbundled switching element attributed a variety of functionalities to each of these terms. To avoid confusion, we will not use these terms in discussing the unbundled local switching element. Instead, we will address commenters' proposals according to the functionality that they recommend be included in the definition of an unbundled local switching element.

[913] A line card is a plug-in electronic printed circuit card that operates ringing, holding, and other features associated with one or several telephone lines.

[914] Purchasing the local switching element does not entitle a requesting carrier to connect its own AIN call processing database to the incumbent LEC's switch, either directly or via the incumbent LEC's signal transfer point or database. Section V.I.4, which discusses the unbundling of incumbent LECs' signaling systems and databases. We also note that E911 and operator services are further unbundled from local switching. *See infra* Section V.I.6.

413. We disagree with commenters who argue that vertical switching features should be classified exclusively as retail services, available to competing providers only through the resale provision of section 251(c)(4).[915] The 1996 Act defines network element as "a facility or equipment used in the provision of a telecommunications service" and "the features, functions, and capabilities that are provided by means of such facility or equipment."[916] Vertical switching features, such as call waiting, are provided through operation of hardware and software comprising the "facility" that is the switch, and thus are "features" and "functions" of the switch.[917] We note that the Illinois Commission recently defined an unbundled local switching element to include vertical switching features.[918] Although we find that vertical switching features should be available to competitors through the resale provision of section 251(c)(4), we reject the view that Congress intended for section 251(c)(4) implicitly to remove vertical switching features from the definition of "network element."[919] Therefore, we find that vertical switching features are part of the unbundled local switching element.[920]

414. At this time we decline to require further unbundling of the local switch into a basic switching element and independent vertical feature elements. Such unbundling does not appear to be necessary to promote local competition. Indeed, most potential local competitors do not recommend that vertical switching features be available as separate network elements. MCI, AT&T and LDDS believe that such features should be available to new entrants as part of the local switching element.[921] We also note that additional unbundling of the local switch would not result in a practical difference in the way the local switching element is provisioned. As discussed below, when a competing provider orders the unbundled basic switching element for a particular customer line, it will designate which vertical features

[915] Section 251(c)(4)(A) requires incumbent LECs "to offer for resale at wholesale rates any telecommunications service that the carrier provides at retail to subscribers who are not telecommunications carriers." 47 U.S.C. § 251(c)(4)(A).

[916] 47 U.S.C. § 153(29).

[917] In some cases vertical features may be provided using hardware and software external to the actual switch. In those instances, the functionality of such external hardware and software is a separate element under section 251(c)(3), and is available to competing providers. *See infra* Section V.I.4, discussing unbundled signaling and databases.

[918] *Illinois Wholesale Order* at 63-66.

[919] *See supra* Section V.H, rejecting arguments that services available for resale under section 251(c)(4) cannot be provided via unbundled elements.

[920] *See infra* Section VII.C.2.b.2, concerning the pricing of an unbundled switching element.

[921] AT&T June 28 *Ex Parte* at 1-2; MCI comments at 31; LDDS comments at 44.

should be activated by the incumbent LEC for that line. In addition, the record indicates that the incremental costs associated with vertical switching features on a per-line basis may be quite small,[922] and may not justify the administrative difficulty for the incumbent LEC or the arbitrator to determine a price for each vertical element. Thus, states can investigate, in arbitration or other proceedings, whether vertical switching features should be made available as separate network elements. We will continue to review and revise our rules in this area as necessary.

415. We conclude that providing access to an unbundled local switching element at a LEC central office is technically feasible. We are not persuaded by the argument that shared use of an unbundled switching element would jeopardize network security and reliability by permitting competitors independently to activate and deactivate various switching features. A competing provider will purchase and obtain the local switching element the same way it obtains an unbundled local loop, that is, by ordering, via electronic interfaces,[923] the local switching element and particular vertical switching features.[924] The incumbent LEC will receive the order and activate (or deactivate) the particular features on the customer line designated by the competing provider. Consequently, the incumbent LEC is not required to relinquish control over operations of the switch.

416. We also reject the argument that a definition of local switching that incorporates shared use of a local switch would involve physical partitioning of the switch.[925] The requirements we establish for local switch unbundling do not entail physical division of the switch, and consequently do not impose the inefficiency or technical difficulties identified by some commenters.

417. Nor are we persuaded by the arguments of some incumbent LECs that an unbundled switching element based on shared use of the local switch is technically infeasible because incumbent LECs lack significant excess capacity at any given time. Initially, many requests for local switching elements from competitors will likely result from the loss of customers by the incumbent LEC. Thus, at least initially, an increase in the use of a local switch by the requesting carrier is not likely to lead to an enormous, immediate increase in switch use overall. If incumbent LECs and competing providers believe that they would

[922] LDDS comments at 57, Letter from Bruce Cox, Government Affairs Director, AT&T, to Elliot Maxwell, FCC, June 25, 1996 (AT&T June 25 *Ex Parte*).

[923] *See infra* Section V.I.4, *infra*, addressing requesting carriers' access to incumbent LECs' ordering and provisioning systems.

[924] Section V.I.5 addresses the arrangements for ordering unbundled network elements.

[925] U S West comments at 55-57.

benefit by quantifying their anticipated demand for switch resources, they are free to do so in the negotiation and arbitration processes. Such planning may be necessary when a competitor anticipates that usage of the local switching element by its customers will place demands on the incumbent LEC's switch that exceed the usage levels anticipated by the incumbent LEC.[926]

418. We conclude that customized routing, which permits requesting carriers to designate the particular outgoing trunks that will carry certain classes of traffic originating from the competing provider's customers, is technically feasible in many LEC switches. Customized routing will enable a competitor to direct particular classes of calls to particular outgoing trunks, which will permit a new entrant to self-provide, or select among other providers of, interoffice facilities, operator services, and directory assistance.[927] Bell Atlantic notes that customized routing is generally technically feasible for local calling, although it notes that the technology and capacity constraints vary from switch to switch.[928] SBC contends that customized routing is technically infeasible for older switches, such as the 1AESS switch.[929] AT&T acknowledges that, although the ability to establish customized routing in 1AESS switches may be affected by the "call load" in each office, only 9.8% of the switches used by the seven RBOCs, GTE and SNET are 1AESS switches.[930] We recognize that the ability of an incumbent LEC to provide customized routing to a requesting carrier will depend on the capability of the particular switch in question. Thus, our requirement that incumbent LECs provide customized routing as part of the "functionality" of the local switching element applies, by definition, only to those switches that are capable of performing customized routing. An incumbent LEC must prove to the state commission that customized routing in a particular switch is not technically feasible.

[926] Bell Atlantic, for example, notes that a competitor's service or pricing packages could stimulate greater switch usage than previously experienced by the incumbent. Letter from Patricia Koch, Assistant Vice President, Bell Atlantic, to William Caton, Acting Secretary, FCC, June 21, 1996 (Bell Atlantic June 21 *Ex Parte*).

[927] *See, e.g.*, AT&T June 28 *Ex Parte*. In addition, we note that the Illinois Commission recently directed Ameritech and Centel to permit a carrier purchasing wholesale local exchange service to designate a provider of operator services and directory assistance other than that of the incumbent LEC. Such access is accomplished through the routing of such calls from the incumbent LEC's switch to the competing provider of the operator service or directory assistance. *See Illinois Wholesale Order* at 45.

[928] Letter from Patricia Koch, Assistant Vice President, Bell Atlantic, to William Caton, Acting Secretary, FCC, June 24, 1996 (Bell Atlantic June 24 *Ex Parte*); *see also* BellSouth comments at 41-42 n.89 (the ability to provide customized routing depends on the quantity of customized routing requests from other competitors).

[929] SBC comments at 41-42.

[930] Letter from Bruce Cox, Government Affairs Director, AT&T, to William F. Caton, Secretary, FCC, July 11, 1996 (AT&T July 11 *Ex Parte*).

419. Section 251(d)(2)(A) requires the Commission, in determining which network elements should be made available to competing providers, to consider "whether access to such network elements as are proprietary in nature is necessary."[931] To withhold a proposed network element from a competing provider, an incumbent LEC must demonstrate that the element is proprietary and that gaining access to that element is not necessary because the competing provider can use other, nonproprietary elements in the incumbent LEC's network to provide service.[932] U S West asserts that switch unbundling could raise concerns involving, among other things, "licensing of intellectual property." It cites a request by one interconnector to be the exclusive provider of particular features in U S West's generic switching software.[933] Bell Atlantic states that it is not at liberty to sub-license the software that operates vertical switching features.[934] We note, however, that these incumbent LECs do not object to providing vertical switching functionalities to requesting carriers under the resale provision of section 251(c)(4).[935] In addition, the vast majority of parties that discuss unbundled local switching do not raise proprietary concerns with the unbundling of either basic local switching or vertical switching features. Even if we accept the claim of U S West and Bell Atlantic that vertical features are proprietary in nature, these carriers do not meet the second consideration in our section 251(d)(2)(A) standard, which requires an incumbent LEC to show that a new entrant could offer the proposed telecommunications service through the use of other, nonproprietary elements in the incumbent LEC's network.[936] Accordingly, we find that access to unbundled local switching is clearly "necessary" under our interpretation of section 251(d)(2)(A).[937]

420. Section 251(d)(2)(B) directs the Commission to consider whether the failure to provide access to an unbundled element "would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[938] We have interpreted

[931] 47 U.S.C. § 251(d)(2)(A).

[932] *See supra* Section V.E.

[933] U S West comments at 55 n.117.

[934] Bell Atlantic comments, Albers Attachment at 17-18.

[935] U S West reply at 26-27; Bell Atlantic comments at 26.

[936] *See supra* Section V.E.

[937] *Id.*

[938] 47 U.S.C. § 251(d)(2)(B).

the term "impair" to mean either increased cost or decreased service quality that would result from using network elements of the incumbent LEC other than the one sought.[939] SBC and MFS contend that access to unbundled local switching may not be essential for new entrants because competitors are likely to deploy their own switches.[940] These parties present no evidence that competitors could provide service using another element in the LEC's network at the same cost and at the same level of quality. In addition, most commenters that address this issue generally argue that local switching is essential for the provision of competing local service,[941] and we agree. We thus conclude that a requesting carrier's ability to offer local exchange services would be impaired, if not thwarted, without access to an unbundled local switching element.

421. Section 251(c)(3) requires that incumbent LECs provide access to unbundled network elements on terms and conditions that are "just, reasonable, and nondiscriminatory."[942] We agree with CompTel and LDDS that new entrants will be disadvantaged if customer switchover is not rapid and transparent. We also note that the Michigan Commission has recognized the significance of customer switchover intervals and has directed Ameritech and GTE to file proposals on how they will "ensure the equal availability of expeditious processing of local, interLATA, and intraLATA carrier changes."[943] Therefore, we require incumbent LECs to switch over customers for local service in the same interval as LECs currently switch end users between interexchange carriers. This requirement applies to switchovers that only require the incumbent LEC to make changes to software. Switchovers that require the incumbent LEC to make physical modifications to its network, such as connecting a competitor's loop to its switch, are not subject to this requirement, and instead are governed by our terms and conditions for all unbundled elements.[944] Today, incumbent LECs routinely change customers' presubscribed interexchange carriers quickly and transparently, thereby contributing to the competitiveness of the interexchange market. We

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[939] *See supra* Section V.E.

[940] SBC reply at 23; MFS comments at 46.

[941] *See, e.g.*, LDDS reply at 18 (unbundled local switching is "critical" to local competition); TIA comments at 18; AT&T Mar. 21 Letter at 17-18.

[942] 47 U.S.C. § 251(c)(3).

[943] *In the Matter, On the Commission's Own Motion, To Establish Permanent Interconnection Arrangements Between Basic Local Exchange Service Providers*, Opinion and Order, Mich. Pub. Serv. Comm'n, Case No. U-10860, at 36-37 (June 5, 1996).

[944] *See supra* Section V.G., discussing provisioning intervals for unbundled network elements.

expect that a similar requirement for local exchange switchovers that require only a software change will similarly contribute to local exchange competition.

422. We reject the proposal by some incumbent LECs to define unbundled local switching as the facilities that provide a *point of access* to the switch, but that would not actually include switching functionality. Under this definition, the purchaser of the local switching element would not actually obtain local switching, only the right to purchase local switching functionality and other switching features at wholesale rates. We believe that the unbundled local switching element must include the functionality of connecting lines and trunks. The definition proposed by these incumbent LECs would contravene the requirement in section 251(c)(3) that incumbent LECs provide network elements "in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service."[945] If a competing provider combined its own loops and transport with the local switching element ("point of access"), it would be unable to provide telecommunications service without separately purchasing, at wholesale rates, switching functionality from the incumbent LEC.

423. We also disagree with the proposal to define local switching as a point of access plus basic switching functionality, but that would exclude vertical switching features.[946] As a legal matter, this definition is inconsistent with the 1996 Act's definition of "network element," which includes all the "features, functionalities, and capabilities provided by means of such facility or equipment."[947] In addition, this definition would not fulfill the pro-competitive objectives of the 1996 Act as effectively as the per-line definition we adopt. A competitor that obtains basic and vertical switching features at cost-based rates will have maximum flexibility to distinguish its offerings from those of the incumbent LEC by developing a variety of service packages and pricing plans.[948] Moreover, an upfront purchase of all local switching features may speed entry by simplifying practical issues such as the pricing of individual switching features.

424. We also address the impact on small incumbent LECs. For example, the Illinois Independent Telephone Association and the Rural Telephone Coalition favor rules that

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[945] 47 U.S.C. § 251(c)(3).

[946] Sprint comments at 34; USTA reply at 16-17; SBC reply at 20; NYNEX reply at 31; MECA comments at 29.

[947] 47 U.S.C. § 153(29); *see supra* section V.C., which interprets the Act's definition of "network element."

[948] *See, e.g.*, LDDS comments at 33; AT&T comments at 21.

recognize the differences between larger and smaller LECs.[949] We have considered the economic impact of our rules in this section on small incumbent LECs. In this section, for example, we expressly provide for the fact that certain LECs may possess switches that are incapable of performing customized routing for competitors that purchase unbundled local switching. As noted by Rural Telephone Coalition and the Illinois Independent Telephone Coalition, this approach is necessary to accommodate the different technical capabilities of large and small carriers. We also note that section 251(f) of the 1996 Act provides relief for certain small LECs from our regulations under section 251.

(2) Tandem Switching Capability

425. We also affirm our tentative conclusion in the NPRM that it is technically feasible for incumbent LECs to provide access to their tandem switches unbundled from interoffice transmission facilities. We note that some states already have required incumbent LECs to unbundle tandem switching.[950] Parties do not contend, pursuant to section 251(d)(2)(A), that tandem switches are proprietary in nature. With regard to section 251(d)(2)(B), we find that competitors' ability to provide telecommunications service would be impaired without unbundled access to tandem switching. Therefore, we find that the availability of unbundled tandem switching will ensure that competitors can deploy their own interoffice facilities and connect them to incumbent LECs' tandem switches where it is efficient to do so.

426. We define the tandem switch element as including the facilities connecting the trunk distribution frames to the switch, and all the functions of the switch itself, including those facilities that establish a temporary transmission path between two other switches. The definition of the tandem switching element also includes the functions that are centralized in tandems rather than in separate end office switches, such as call recording, the routing of calls to operator services, and signaling conversion functions.

(3) Packet Switching Capability

427. At this time, we decline to find, as requested by AT&T and MCI, that incumbent LECs' packet switches should be identified as network elements. Because so few parties commented on the packet switches in connection with section 251(c)(3), the record is insufficient for us to decide whether packet switches should be defined as a separate network element. We will continue to review and revise our rules, but at present, we do not adopt a national rule for the unbundling of packet switches.

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[949] Illinois Ind. Tel. Ass'n comments at 1; Rural Tel. Coalition reply at 37.

[950] *See, e.g.*, Ameritech comments at 43, Cincinnati Bell comments at 18, GTE comments at 38, AT&T March 21 Letter at 23.

3. Interoffice Transmission Facilities

a. Background

428. In the NPRM, we proposed to require incumbent LECs to make available unbundled transport facilities in a manner that corresponds to the rate structure for interstate transport charges. We specifically proposed to require unbundled access to links between the end office and the serving wire center (SWC), the SWC and the IXC point of presence (POP), the end office and the tandem switch, and the tandem switch and the SWC. We also tentatively concluded that incumbent LECs should be required to unbundle channel termination facilities for special access from the interoffice facilities. In addition, we requested comment on whether and how other interoffice facilities used by incumbent LECs should be unbundled.

b. Comments

429. The vast majority of the parties that discussed local transport unbundling supported the Commission's proposal to provide access to dedicated and shared interoffice facilities as unbundled network elements.[951] BellSouth, for example, asserts that individual transport components should be available as unbundled elements, and notes that some LECs already have unbundled transport from its other access services.[952]

430. Several incumbent LECs contend that they already provide unbundled transport services pursuant to the Commission's *Expanded Interconnection* rules.[953] PacTel asserts that its proposal to tariff unbundled transport elements, including dedicated transport and tandem-switched transport, will fulfill its duties under sections 251 and 271.[954] Bell Atlantic and TIA, on the other hand, indicate that existing tariffs for unbundled transport facilities are

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[951] AT&T comments at 22; USTA comments at 35; Frontier comments at 16; GCI comments at 12; Sprint comments at 39; GST comments at 24; NYNEX comments at 63; NEXTLINK comments at 23; ACSI comments at 41; MCI comments at 17; ALTS comments at 30; Citizens Utilities comments at 15; CompTel comments at 45; TIA comments at 13; Bell Atlantic comments at 22; U S West comments at 48; Teleport comments at 37; MFS comments at 48; USTA comments at 35; TCC comments at 35; New York Commission comments at 27; Ameritech comments at 43; BellSouth comments at 42.

[952] BellSouth comments at 42-43.

[953] Ameritech comments at 42-43; Cincinnati Bell comments at 18; GTE comments at 38.

[954] PacTel comments at 57.

insufficient to comply with the 1996 Act.[955] MFS asks the Commission to clarify that, under the expanded interconnection rules as well as the 1996 Act, incumbent LECs must unbundle all interoffice transport facilities without requiring the requesting carrier to purchase channel terminations or other elements.[956]

431. Parties agree that local transport unbundling is technically feasible.[957] MCI, for example, asserts that transport facilities are already unbundled for exchange access and thus there is no question that unbundling is technically feasible.[958] NCTA, GST, TIA, and MFS contend that unbundling transport elements should be presumed technically feasible because of the Commission's *Expanded Interconnection* proceeding.[959] AT&T and Telecommunications Resellers Association point out that IXCs currently obtain interconnections between transport elements and the tandem switches pursuant to standard specifications.[960]

432. A number of commenters specify particular components of local transport that should be unbundled: (1) dedicated transport trunks from incumbent LEC end offices to competitors' switches, to IXC POPs, and to other end offices of the incumbent LEC; and (2) common transport trunks between incumbent LEC end offices and tandem switches.[961] In addition, ALTS, MFS, AT&T, and MCI contend that requesting carriers should have the ability to order such transport trunks with or without electronics (*i.e.*, as "dark fiber").[962] GTE disagrees and argues that the definition of network element only encompasses facilities "*used*

[955] Bell Atlantic comments at 27 (Bell Atlantic has already filed, or plans to file, intrastate tariffs for the network elements it has unbundled under expanded interconnection.); TIA comments at 13.

[956] MFS comments at 48; *accord* AT&T comments at 22; MCI comments at 17.

[957] *See, e.g.*, GST comments at 24; AT&T comments at 22; GTE reply at 18-19; GVNW comments at 28; NYNEX comments at 65; MCI comments at 32; Comcast comments at 18; CompTel comments at 31; NCTA comments at 42; MFS comments at 48; Telecommunications Resellers Ass'n comments at 35; Ameritech comments at 43.

[958] MCI comments at 32.

[959] NCTA comments at 42; GST comments at 24; TIA comments at 13; MFS comments at 47-48.

[960] AT&T comments at 22; Telecommunications Resellers Ass'n comments at 35.

[961] *See, e.g.*, AT&T comments at 22; NYNEX comments at 62-63; GVNW comments at 20; TCC reply at 18; ACSI comments, Attachment 1 at 5-6.

[962] ALTS comments at 30; MCI comments at 32; AT&T comments at 22; MFS comments at 48.

in the provision of telecommunications service," and that dark fiber does not meet this definition because LECs do not "use" it in their networks.[963]

433. Several parties ask that the Commission specify additional transport components as unbundled network elements beyond those proposed in the NPRM. AT&T contends that incumbent LECs should have to unbundle their digital cross-connect systems (DCSs), which are now used to disaggregate high-speed traffic from IXCs into individual circuits.[964] MCI and AT&T contend that these facilities will enable IXCs to use more cost-efficient, high-speed facilities to route traffic to the incumbent LEC and have the traffic disaggregated into individual circuits at the DCS.[965] CompTel asserts that, when direct-trunked transport transits a tandem switch or other intermediate node, incumbent LECs should offer each individual link as an unbundled element.[966] MCI also asserts that competitors need "loop transport" to carry traffic from the incumbent's unbundled loops to the competitor's switch.[967]

434. A number of parties assert that the availability of unbundled transport facilities would promote local competition. AT&T contends that it seeks to combine unbundled common transport with competitive tandem switching and dedicated transport to provide IXCs with alternative access service from the competitor's end office to the IXC POP.[968] AT&T, Telecommunications Resellers Association, and TIA assert that the availability of unbundled dedicated transport will allow competitors to connect their switches to incumbent LEC switches efficiently.[969] MCI contends that incumbent LECs have denied MCI access to trunks between the incumbent LECs' end offices, thereby increasing MCI's costs of deploying local facilities and restricting MCI's ability to acquire redundant facilities for its local traffic.[970] NYNEX and LDDS recommend that the Commission require incumbent LECs to offer unbundled dedicated transport between their own end office or tandem switches and the

[963] GTE reply at 21.

[964] AT&T comments at 22 n.23; *accord* SBC comments at 87.

[965] AT&T comments at 22; MCI comments at 17.

[966] CompTel comments at 45.

[967] MCI comments at 22.

[968] AT&T Mar. 21 Letter at 22.

[969] *Id.*; Telecommunications Resellers Ass'n comments at 35; TIA comments at 13.

[970] MCI comments at 46.

requesting carrier's switch or POP.[971] The Texas Public Utility Commission has specifically required incumbent LECs to provide competitors with "loop facilities transport service," which connects an unbundled loop to the competitor's switch.[972]

435. Several parties caution that pricing distortions could accompany a ruling that transport components are network elements under section 251(c)(3).[973] GTE, for example, argues that the Commission should not permit requesting carriers to use unbundled transport elements to avoid access charges.[974] Similarly, Ameritech states that the 1996 Act prohibits arbitrary price distinctions between switched and special transport, and that, if interoffice facilities are unbundled from tandem switching, no such distinction can be made.[975] Other parties maintain that the 1996 Act requires cost-based pricing of all unbundled elements, including transport elements.[976]

436. A few parties oppose a requirement that incumbent LECs unbundle facilities that correspond to interstate transport and special access rate elements.[977] Cincinnati Bell argues that these elements are already available through existing tariffs, and therefore should not be required to be offered as unbundled elements pursuant to the 1996 Act.[978] MECA argues that local transport and special access facilities are toll access facilities and therefore are not necessary to provide competitive basic local exchange service.[979] MECA also states that any requirement concerning local transport and special access should not apply to any LEC that was not covered by the MFJ restrictions and, in order to minimize arbitrage opportunities, any

[971] NYNEX comments at 63 n.126; LDDS reply at 18.

[972] Texas Commission comments at 18.

[973] *See e.g.*, GTE comments at 38; CompTel comments at 45; Ameritech comments at 43.

[974] GTE comments at 38.

[975] Ameritech comments at 43.

[976] ACSI comments at 42; MCI comments at 32.

[977] *See, e.g.*, MECA comments at 38; Cincinnati Bell comments at 18.

[978] Cincinnati Bell comments at 18.

[979] MECA comments at 38.

modifications to local transport and special access must wait until the LECs have restructured their local rates.[980]

437. TCC urges the Commission to define dedicated transport as an interoffice transmission path dedicated to a single carrier, including multiplexing and grooming, redundant facilities, and cross-office wiring to a digital cross-connect panel.[981] ACSI argues that the Commission should require incumbent LECs to make both dedicated and switched transport available at the DS-0, DS-1, DS-3 and Optical Carrier levels, which should be offered as completely unbundled links between serving wire centers (SWCs) and interconnector points-of-presence, the central office and the SWC, the end office and the tandem, and the SWC and the tandem.[982] Teleport advocates that interoffice trunking facilities be defined in terms of their underlying transmission characteristics without reference to the use of the facility.[983]

438. ALTS argues that, since there are currently well-defined standards for transport, there should be no impediment to requiring equivalent levels of technical performance among competing carriers, *i.e.*, no meaningful distinctions among the technical performance of different DS1s.[984] Therefore, as in the case with local loops, ALTS contends that competitors should receive the same or better ordering, provisioning, and installation service as the incumbent provides itself and that penalties should be assessed if deadlines are not met.[985]

c. Discussion

439. We conclude that incumbent LECs must provide interoffice transmission facilities on an unbundled basis to requesting carriers. The record supports our conclusion that such access is technically feasible and would promote competition in the local exchange

[980] MECA comments at 38.

[981] TCC comments at 38; *see also* NYNEX comments at 63 for a similar definition.

[982] ACSI comments at 41.

[983] Teleport comments at 37.

[984] ALTS comments at 30.

[985] *Id.* at 30-31.

market. We note that the 1996 Act requires BOCs to unbundle transport facilities prior to entering the in-region, interLATA market.[986]

440. We require incumbent LECs to provide unbundled access to shared transmission facilities between end offices and the tandem switch.[987] Further, incumbent LECs must provide unbundled access to dedicated transmission facilities between LEC central offices or between such offices and those of competing carriers. This includes, at a minimum, interoffice facilities between end offices and serving wire centers (SWCs), SWCs and IXC POPs, tandem switches and SWCs, end offices or tandems of the incumbent LEC, and the wire centers of incumbent LECs and requesting carriers. The incumbent LEC must also provide, to the extent discussed below, all technically feasible transmission capabilities, such as DS1, DS3, and Optical Carrier levels (*e.g.* OC-3/12/48/96) that the competing provider could use to provide telecommunications services. We conclude that an incumbent LEC may not limit the facilities to which such interoffice facilities are connected, provided such interconnection is technically feasible, or the use of such facilities. In general, this means th incumbent LECs must provide interoffice facilities between wire centers owned by incumben LECs or requesting carriers, or between switches owned by incumbent LECs or requesting carriers. For example, an interoffice facility could be used by a competitor to connect to the incumbent LEC's switch or to the competitor's collocated equipment. We agree with the Texas Commission that a competitor should have the ability to use interoffice transmission facilities to connect loops directly to its switch. We anticipate that these requirements will reduce entry barriers into the local exchange market by enabling new entrants to establish efficient local networks by combining their own interoffice facilities with those of the incumbent LEC.

441. The ability of new entrants to purchase the interoffice facilities we have identified will increase the speed with which competitors enter the market. By unbundling various dedicated and shared interoffice facilities, a new entrant can purchase all interoffice facilities on an unbundled basis as part of a competing local network, or it can combine its own interoffice facilities with those of the incumbent LEC. The opportunity to purchase unbundled interoffice facilities will decrease the cost of entry compared to the much higher cost that would be incurred by an entrant that had to construct all of its own facilities. An efficient new entrant might not be able to compete if it were required to build interoffice facilities where it would be more efficient to use the incumbent LEC's facilities. We recognize that there are alternative suppliers of interoffice facilities in certain areas. We are convinced, however, that entry will be facilitated if competitors have greater, not fewer, options for procuring interoffice facilities as part of their local networks, and that Congress

[986] 47 U.S.C. § 271(c)(2)(B)(v).

[987] Section V.I. addresses unbundled access to the tandem switching element.

intended for competitors to have these options available from competitors. Thus, the rules we establish for the unbundled interoffice facilities should maximize a competitor's flexibility to use new technologies in combination with existing LEC facilities.

442. We find that it is technically feasible for incumbent LECs to unbundle the foregoing interoffice facilities as individual network elements. The interconnection and unbundling arrangements among the larger LECs, IXCs, and CAPs that resulted from our *Expanded Interconnection* rules confirm the technical feasibility of unbundling interoffice facilities used by incumbent LECs to provide special access and switched transport.[988] As AT&T and Telecommunications Resellers Association point out, IXCs currently interconnect with incumbent LECs' transport facilities pursuant to standard specifications.[989] We also note that commenters do not identify technical feasibility problems with unbundling interoffice facilities.

443. We also find that it is technically feasible for incumbent LECs to unbundle certain interoffice facilities not addressed in our *Expanded Interconnection* proceeding. First, we conclude that an incumbent LEC must provide unbundled access to interoffice facilities between its end offices, and between any of its switching offices and a new entrant's switching office, where such interoffice facilities exist. This allows a new entrant to purchase unbundled facilities between two end offices of the incumbent LEC, or between the new entrant's switching office and the incumbent LEC's switching office. Although our *Expanded Interconnection* rules did not specifically require incumbent LECs to unbundle these facilities, commenters do not identify any potential technical problem with such unbundling. Moreover, some LECs already offer unbundled dedicated interoffice facilities, for example, between their end offices and SWCs for exchange access.

444. In addition, as a condition of offering unbundled interoffice facilities, we require incumbent LECs to provide requesting carriers with access to digital cross-connect system (DCS) functionality. A DCS aggregates and disaggregates high-speed traffic carried between IXCs' POPs and incumbent LECs' switching offices, thereby facilitating the use of cost-efficient, high-speed interoffice facilities. AT&T notes that the BOCs, GTE, and other large LECs currently make DCS capabilities available for the termination of interexchange traffic.[990] We find that the use of DCS functionality could facilitate competitors' deployment of high-speed interoffice facilities between their own networks and LECs' switching offices.

[988] *See, e.g.*, MCI comments at 32; NCTA comments at 42; GST comments at 24; TIA comments at 13; MFS comments at 47-48.

[989] AT&T comments at 22; Telecommunications Resellers Ass'n comments at 35.

[990] Letter from Bruce Cox, Government Affairs Director, AT&T, to William F. Caton, Acting Secretary, FCC, July 18, 1996.

Therefore, we require incumbent LECs to offer DCS capabilities in the same manner that they offer such capabilities to IXCs that purchase transport services.

445. We disagree with PacTel's assertion that it is not technically feasible for incumbent LECs to provide DCS functionality to competitors that purchase unbundled interoffice facilities.[991] First, contrary to PacTel's assertion, we do not require incumbent LECs to develop new arrangements for the offering of DCS capabilities to competitors. We only require that DCS capabilities be made available to competitors to the extent incumbent LECs offer such capabilities to IXCs. Second, PacTel suggests the provision of DCS capabilities requires physical partitioning of the DCS equipment in order to prevent carriers from gaining control of each other's traffic.[992] We do not require such partitioning for the provision of DCS capabilities. As noted above, we only require incumbent LECs to permit competitors to use DCS functionality in the same manner that incumbent LECs now permit IXCs to use such functionality.

446. Section 251(d)(2)(A) requires the Commission to consider whether "access to such network elements as are proprietary in nature is necessary."[993] Commenters do not identify any proprietary concerns relating to the provision of interoffice facilities that LECs are required to unbundle. We also note that many of these facilities are also currently offered on an unbundled basis to competing carriers. Therefore, the record provides no basis for withholding these facilities from competitors based on proprietary considerations.

447. Section 251(d)(2)(B) requires the Commission to consider whether the failure to provide access to an unbundled element "would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[994] We have interpreted the term "impair" to mean either increased cost or decreased service quality that would result from using network elements other than the one sought.[995] Certain commenters contend that unbundled access to these facilities would improve their ability to provide competitive local

[991] Letter from Alan Ciamporcero, Vice President, PacTel, to William F. Caton, Acting Secretary, FCC, July 17, 1996 (PacTel July 17 *Ex Parte*).

[992] *Id.*

[993] 47 U.S.C. § 251(d)(2)(A).

[994] 47 U.S.C. § 251(d)(2)(B).

[995] *See supra* Section V.E.

change and exchange access service.[996] MCI, for example, argues that its inability to obtain ibundled access to trunks between an incumbent LEC's end offices raises its cost of oviding local service.[997] Accordingly, we conclude that the section 251(d)(2)(B) requires cumbent LECs to provide access to shared interoffice facilities and dedicated interoffice cilities between the above-identified points in incumbent LECs' networks, including cilities between incumbent LECs' end offices, new entrant's switching offices and LEC itching offices, and DCSs. We believe that access to these interoffice facilities will iprove competitors' ability to design efficient network architecture, and in particular, to mbine their own switching functionality with the incumbent LEC's unbundled loops.[998]

448. We reject Cincinnati Bell's argument that existing tariffs for transport and ecial access services filed pursuant to our *Expanded Interconnection* rules fulfill our ligation to implement the requirements of section 251(c).[999] First, the *Expanded terconnection* rules require the unbundling of interstate transport services only by Class A rriers [1000] whereas section 251(c) requires network unbundling by all incumbent LECs, cept for carriers that are exempt under section 251(f) from our interconnection rules.[1001] nsequently, some non-Class A carriers that were not subject to our *Expanded terconnection* requirements will be required to comply with the requirements of this Order. cond, we find that the Class A carriers' existing tariffs for unbundled transport elements do t satisfy the unbundling requirement of section 251(c), as suggested by Cincinnati Bell, cause such tariffs are only for interstate access services, not for unbundled interoffice ilities. As such, existing federal tariffs for transport and special access exclude *intra*state nsport, and therefore are not equivalent to unbundled interoffice facilities, which we have termined to be nonjurisdictional in nature.

See, e.g., AT&T Mar. 21 Letter; LDDS Comments at 47.

MCI comments at 46.

See, e.g., MCI comments at 22.

Cincinnati Bell comments at 18.

Class A carriers are those exchange carriers having more than $100 million in total company regulated enues. *See 1990 Cost Support Order*, 5 FCC Rcd 1364, (Com. Car. Bur. 1990); *Commission Requirements Cost Support Material to be Filed with 1989 Annual Access Tariffs*, 4 FCC Rcd 1662, 1663 (Com. Car. Bur. 8).

See infra Section XII, addressing the exemption for rural LECs.

449. We also disagree with MECA, GTE, and Ameritech that we should consider "pricing distortions" in adopting rules for unbundled interoffice facilities.[1002] Section , below, addresses the pricing of unbundled network elements identified pursuant to section 251(c)(3) as it relates to our current access charge rules. Nor are we are persuaded by MECA's argument that incumbent LECs not subject to the MFJ should not be required to unbundle transport facilities because, according to MECA, such facilities are unnecessary for local competition.[1003] As discussed above, the ability of a new entrant to obtain unbundled access to incumbent LECs' interoffice facilities, including those facilities that carry interLATA traffic, is essential to that competitor's ability to provide competing telephone service.

450. We do not impose specific terms and conditions for the provision of unbundled interoffice facilities. We believe that the rules we establish in this Order for all unbundled network elements adequately address ALTS's concern regarding the provisioning, billing, and maintenance of unbundled transport facilities.[1004] We also decline at this time to address the unbundling of incumbent LECs' "dark fiber." Parties that address this issue do not provide us with information on whether dark fiber qualifies as a network element under sections 251(c)(3) and 251(d)(2). Therefore, we lack a sufficient record on which to decide this issue. We will continue to review and revise our rules in this area as necessary.

451. Rural Telephone Coalition contends that incumbent LECs should not be required to construct new facilities to accommodate new entrants.[1005] We have considered the economic impact of our rules in this section on small incumbent LECs. In this section, for example, we expressly limit the provision of unbundled interoffice facilities to *existing* incumbent LEC facilities. We also note that section 251(f) of the 1996 Act provides relief for certain small LECs from our regulations under section 251.

4. Databases and Signaling Systems

a. Background

(1) NPRM

[1002] MECA comments at 38, GTE comments at 38; Ameritech comments at 43.

[1003] MECA comments at 38.

[1004] Section V.G addresses terms and conditions governing incumbent LECs' provision of access to unbundled network elements.

[1005] Rural Tel. Coalition reply at 36.

452. In the NPRM, we tentatively concluded that incumbent LECs should be required to unbundle access to their signaling systems and databases as network elements.[1006] We asked commenters to identify points at which carriers interconnect with SS7 networks[1007] today, as well as the technical feasibility of establishing other points of access and interconnection.[1008] We also asked commenters to identify those signaling and database functions currently provided by incumbent LECs on an unbundled basis, and other functions not currently offered by incumbent LECs, that the parties believe should be offered on an unbundled basis.[1009]

453. In the NPRM, we noted the possibility that competitors that provide local exchange service using resold incumbent LEC services or unbundled elements might want to connect an alternative call processing database to the incumbent LEC's SS7 network in order to offer services and features not available through the incumbent LEC's own SS7 network databases.[1010]

454. We also sought comment on unbundling access to the Advanced Intelligent Network (AIN), and referenced our separate Intelligent Networks proceeding which deals with related issues.[1011] We sought comment on whether to unbundle access to AIN facilities and functionalities.

(2) SS7 Signaling Network Technology

455. Signaling systems facilitate the routing of telephone calls between switches. Most LECs employ signaling networks that are physically separate from their voice networks, and these "out-of-band" signaling networks simultaneously carry signaling messages for

[1006] NPRM at para. 107.

[1007] A signaling network that is physically separate from the voice networks.

[1008] NPRM at para. 108.

[1009] NPRM at para. 108.

[1010] NPRM at para. 112.

[1011] NPRM at para. 113; *see In the Matter of Intelligent Networks*, CC Docket No. 91-346, Notice of Inquiry, 6 FCC Rcd 7256 (1991), Notice of Proposed Rulemaking, 8 FCC Rcd 6813 (1993) (*Intelligent Networks*). We incorporated the record of the *Intelligent Network* proceeding into this docket by reference. NPRM at para. 113 n.151.

multiple calls. In general, most LECs' signaling networks adhere to a Bellcore standard Signaling System 7 (SS7) protocol.[1012]

456. SS7 networks use signaling links to transmit routing messages between switches, and between switches and call-related databases. A typical SS7 network includes a signaling link, which transmits signaling information in packets, from a local switch to a signaling transfer point (STP), which is a high-capacity packet switch.[1013] The STP switches packets onto other links according to the address information contained in the packet.[1014] These additional links extend to other switches, databases, and STPs in the LEC's network.[1015] A switch routing a call to another switch will initiate a series of signaling messages via signaling links through an STP to establish a call path on the voice network between the switches.

457. As mentioned above, the SS7 network also employs signaling links (via STPs) between switches and call-related databases, such as the Line Information Database (LIDB), Toll Free Calling (*i.e.*, 800, 888 number) database, and AIN databases. These links enable a switch to send queries via the SS7 network to call-related databases, which return customer information or instructions for call routing to the switch.[1016]

458. From the perspective of a switch in a LEC network, the databases discussed above merely supply information or instructions. Updating or populating the information in such databases, however, takes place through a separate process involving different equipment. Carriers input information directly into a service management system (SMS), which in turn downloads such information into the individual databases.

459. The Advanced Intelligent Network (AIN) is a network architecture that uses distributed intelligence in centralized databases to control call processing and manage network

[1012] The SS7 protocol is widely used and has been adopted by Bellcore, the American National Standards Institute, and the International Telecommunication Union--Telecommunication Standardization Sector. *See* Bellcore, BOC Notes on the LEC Networks (1994).

[1013] STPs are usually deployed in pairs for redundancy purposes. *Id.*

[1014] Any element capable of handling SS7 signaling messages is also generally referred to as a Signaling Point. Each Signaling Point has a unique network address and every SS7 signaling message has a routing label containing addresses for the origination and destination of the message plus a signaling link selection code. *Id.*

[1015] For example, an STP to STP connection is generally used for inter-network interconnection. An STP to switch connection is a common part of the SS7 network and is used to connect end offices to the SS7 network. A connection between a call-related database and a switch is usually done via a connection at an STP (*i.e.*, database to STP to switch). *Id.*

[1016] Switch software commonly referred to as a "trigger" interrupts call progress, in order for the switch to query call-related databases. *Id.*

information, rather than performing those functions at every switch. An AIN-capable switch[1017] halts call progress when a resident software "trigger" is activated, and uses the SS7 network to access intelligent databases, known as Service Control Points (SCPs), that contain service software and subscriber information, for instruction on how to route, monitor, or terminate the call.[1018] AIN is being used in the deployment of number portability, wireless roaming, and such advanced services as same number service (i.e., 500 number service) and voice recognition dialing. AIN services are designed and tested in an off-line computer known as a Service Creation Environment (SCE). Once a service is successfully tested, the software is transferred to an SMS that administers and supports SCP databases in the network. The SMS then regularly downloads software and information to an SCP where interaction with the voice network takes place via the signaling links and STPs discussed above.

b. Comments

460. Almost all parties, including incumbent LECs, support the Commission's tentative conclusion to require incumbent LECs to unbundle access to their signaling systems.[1019] Parties generally agree that access to SS7 network signaling is essential to the provision of competitive local exchange service and that providing such access is technically feasible.[1020] Indeed, most BOCs state that they already provide access to their signaling

[1017] A switch with AIN capabilities is referred to as a service switching point (SSP). *Id.*

[1018] Switch queries and database responses use a part of the SS7 protocol called the Transaction Capabilities Application Part (TCAP). *Id.*

[1019] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 24; ACSI comments at 42; ALTS comments at 31; AT&T comments at 23; Comcast comments at 20; Ericsson comments at 5; GCI comments at 12; GST comments at 24; Intermedia comments at 13; MFS comments at 48-49; MCI comments at 32; Sprint comments at 39; Teleport comments at 37; Time Warner comments at 44-45; Ameritech comments at 46-47; BellSouth comments at 43; NYNEX comments at 71; PacTel comments at 57-60; Alabama Commission comments at 18; District of Columbia Commission comments at 23; Florida Commission comments at 17; Mass. Commission comments at 7; New York Commission comments at 27; Wyoming Commission comments at 23. These parties also generally support access to databases associated with signaling. Some parties, however, urge the Commission to weigh the potential harm from access to database and signaling systems, which might give someone the opportunity to cause inadvertent or malicious damage to large parts of the public switched network. Secretary of Defense comments at 6-7; Sprint comments at 39-40; Lincoln Tel. reply at 15; GVNW comments at 20, 29 (screening necessary to prevent network failures from proliferating between interconnected networks).

[1020] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 24; ACSI comments at 42; ALTS comments at 31; AT&T comments at 23; Citizens Utilities comments at 15; CompTel comments at 43; Continental comments at 19; Ericsson comments at 5; Frontier comments at 16; GCI comments at 12; LCI comments at 18; MCI comments at 32; NEXTLINK comments at 23; Sprint comments at 39-40; TIA comments at 14; Ameritech comments at 47; Bell Atlantic comments at 27-28; GTE comments at 38-41; U S West comments at 57-58; California Commission comments at 26; Colorado Commission comments at 24; Louisiana Commission comments at 5; Wyoming Commission comments at 23-24; USTN reply at 4.

systems.[1021] BellSouth states that it currently provides such access at its STPs via signaling links to all carriers, including IXCs, independent telephone companies, wireless carriers, and other local exchange carriers.[1022] Commenters also report that independent SS7 network aggregators currently provide access to signaling systems to many independent local exchange and interexchange carriers, and to some competitive local carriers.[1023] In addition, several state commissions note that they already have, or are considering, a requirement that incumbent LECs unbundle access to their signaling systems, including associated databases.[1024]

461. Some incumbent LECs argue that, because there are competitive providers for SS7 network services, there is no need for the Commission to require incumbent LECs to unbundle these network elements for competing carriers.[1025] Most potential competitors counter that access to incumbent LEC SS7 networks will be necessary for some carriers, either because alternative providers of signaling systems and databases will not be available to them or because it will not be technically feasible to use any signaling network other than the incumbent LEC's SS7 network.[1026] AT&T argues that, even where there are alternative SS7

[1021] Ameritech comments at 46-47; Bell Atlantic comments at 27-30; BellSouth comments at 43; GTE comments at 40-41; NYNEX comments at 71; PacTel comments at 58-59; SBC comments at 46-48; Sprint comments at 39-41; USTA comments at 36.

[1022] BellSouth comments at 43.

[1023] AT&T comments at 23; BellSouth comments at 44-45; NYNEX comments at 71; GVNW comments at 29 (most small incumbent LECs obtain SS7 functionalities from US Intelco or a neighboring large incumbent LEC); GTE comments at 40-41 n.61 (competitors include Independent Telecommunications Network, Southern New England Telephone, and GTE Intelligent Network Services); NYNEX comments at 71; PacTel comments at 58; Bell Atlantic comments at Attachment 3, 16 (independent SS7 providers offer an out-of-band signaling channel which allows the service providers to interconnect with other SS7 networks); USTN reply at 1. Commenters note that these aggregators also provide access to databases associated with signaling.

[1024] *See, e.g.*, California Commission comments at 26 (under consideration by the California Commission); Colorado Commission comments at 24; Louisiana Commission comments at Attachment A; Michigan Commission comments at 12; Texas Commission comments at 19; Wyoming Commission comments at 23-24 (Wyoming Commission has draft rules only); In the Matter of the Commission Investigation Relative to the Establishment of Local Exchange Competition and Other Competitive Issues, Case No. 95-845-TP-COI at 49 (Ohio Commission June 12, 1996) (access to SS7 functionalities, and necessary customer databases such as 911, LIDB, Toll Free Calling, and Directory Assistance).

[1025] *See, e.g.*, Bell Atlantic comments at 27-28; BellSouth comments at 44-45; GTE comments at 40-41 (access is not necessary under section 251(d)(2)(A) to the extent it is proprietary and denial of such access would not impair the provision of competitive services under section 251(d)(2)(B) to the extent it is not proprietary); PacTel comments at 40, 57-60; NYNEX comments at 71 (there are already alternative suppliers of these functions, and as demand grows, more will enter the market).

[1026] *See* AT&T comments at 23; Letter from Frank Simone, Regulatory Division Manager, Federal Government Affairs, AT&T to William Caton, Acting Secretary, FCC, June 13, 1996 (AT&T June 13 *Ex Parte*).

networks, unbundling of the incumbent's SS7 network will increase competition and help control costs for new entrants.[1027]

462. Some incumbent LECs contend that the 1996 Act only requires them to unbundle access to their signaling systems and databases to the extent necessary to support call routing and completion for competitors.[1028] Other parties, including IXCs, disagree and contend that access to incumbent LECs' signaling systems under the 1996 Act should include access to all associated databases and use of deployed AIN technology, and that such access is necessary in order for them to compete successfully in the local exchange market.[1029]

463. Many parties argue that open access and interconnection to incumbent LECs' SS7 networks and signaling protocols are critical to maintaining the seamless routing and completion of traffic between competing carriers.[1030] Frontier asserts that the use of proprietary or closed protocols by incumbent LECs effectively can prevent interconnected networks from communicating with each other.[1031] Several state commissions have proposed or required that incumbent LECs provide unaltered transmission of signaling information between interconnecting carriers and their customers.[1032] In support of such access, several commenters cite recent interconnection agreements that provide for the exchange of SS7 signaling messages.[1033]

[1027] AT&T comments at 23; *accord* Telecommunications Resellers Ass'n comments at 36.

[1028] ALLTEL comments at 10; Ameritech comments at 46-47; Bell Atlantic comments at 22.

[1029] *See, e.g.*, AT&T comments at 23; MCI reply at 30-31.

[1030] ACSI comments at 45 (open access is important to support CLASS features and access to databases); Frontier comments at 16; GST comments at 24; MCI comments at 33; New York Commission comments at 27 (signaling systems may represent a bottleneck to efficient exchange of traffic for all LECs); Texas Commission comments at 20; Wyoming Commission comments at 24; USTN reply comments at 2.

[1031] Frontier comments at 16 n.31 (such anti-competitive behavior would be contrary to the pro-competitive goals of the 1996 Act); *accord* Wyoming Commission comments at 24 (incumbent LECs may not claim a proprietary right to signaling protocols).

[1032] Wyoming Commission comments at 23-24 (Wyoming Commission draft rules require unaltered transmission of signaling information); Texas Commission comments at 19 (Texas law requires interconnecting carriers to provide nondiscriminatory access to ensure the interoperability of networks and service to end users).

[1033] Georgia Commission comments at Attachment E 6-7 (BellSouth and MCIMetro interconnection agreement provides for the exchange of SS7 signaling messages including the Transaction Capabilities Application Part (TCAP) part of the SS7 protocol that supports *inter alia* CLASS features).

464. Virtually all parties agree that physical access, or interconnection, to the incumbent LEC's SS7 network should occur at the STP, because it provides essential network management and security functions that are not performed by other SS7 network elements.[1034] Commenters assert that such access at the STP would provide other carriers with access to all of the functions of an incumbent LEC's SS7 network.[1035] A few parties urge the Commission to require incumbent LECs to unbundle direct access to SCP databases.[1036] Most commenters, including all of the incumbent LECs, assert that such access is not technically feasible because SCP databases do not perform the mediation functions present at the STP.[1037] Some incumbent LECs argue that direct access to any SS7 network elements, other than the STP, would require development of additional industry standards before such access could be considered technically feasible.[1038]

465. Several parties advocate access to unbundled signaling links and STPs.[1039] BellSouth, however, argues that incumbent LECs should only have to provide access to their SS7 network at an STP for competitors.[1040] Parties describe several methods for competing

[1034] *See, e.g.*, Ameritech comments at 48-50; Bell Atlantic comments at 27; MCI comments at 34-35; NYNEX comments at 71; Sprint comments at 40. Part of the STP security function is to screen incoming signaling traffic for unusable messages and to prevent them from reaching the SCP or switch where they could potentially cause reliability and performance problems. GVNW comments at 29; SBC comments at 46; USTA comments at 36. The STP also prevents unauthorized access to proprietary information. GTE comments at 39-40.

[1035] Bell Atlantic comments at 27; GTE comments at 39; USTA comments at 36. *See* AT&T comments at 24 n.25.

[1036] Frontier comments at 16; LCI comments at 18.

[1037] *See, e.g.*, ACSI at 45; Bell Atlantic comments at 27-28; Colorado Commission comments at 24 (Colorado Commission requires unbundled access to the SCP via the STP); Comcast comments at 18; GTE comments at 40 (until appropriate mediation techniques and associated software and hardware are developed, access to SCP databases should remain through the STP); PacTel comments at 59; NYNEX comments at 71; SBC comments at 47; Ameritech reply at 20-21 (industry has yet to develop standards for SCP access); AT&T reply at 19-20 n.32; PacTel reply at 21-22.

[1038] GTE comments at 40; SBC comments at 47; Sprint comments at 40.

[1039] ALTS comments at Attachment A, 23; AT&T comments at 23; Cable & Wireless comments at 19, 24-25; Citizens Utilities comments at 15; GCI comments at 12; Frontier comments at 16; Telecommunications Resellers Ass'n comments at 35; NYNEX comments at 71 (provides unbundled access to network signaling resources for call set up and for database queries through unbundled signaling links and ports at its STPs); PacTel reply at 21-22; TIA comments at 14; California Commission comments at 26 (California Commission is considering *inter alia*, unbundling STPs and signaling links); Colorado Commission comments at 26; Wyoming Commission comments at 23-24 (Wyoming Commission draft rules require unbundling of signaling links, STPs, and SCPs); Iowa Commission comments at Appendix B, 4 (arguing that signaling links and STPs must be unbundled by incumbent LECs).

[1040] BellSouth reply at 23.

carriers to access unbundled elements of the incumbent LEC's SS7 network. A new entrant could provide or purchase signaling links to connect its switch to the incumbent LEC's STP, or it could provide its own signaling link and STP and then connect its STP to the incumbent LEC's STP.[1041] SBC adds that a competing carrier could also contract with a third party that has already established signaling link connectivity to the incumbent LEC's STPs.[1042] SBC also notes that it requires certification of new companies before implementing SS7 interconnection in order to protect the integrity of its network.[1043]

466. Commenters disagree over what databases qualify as network elements under the 1996 Act. Some parties, including IXCs and other potential local competitors, argue that access to all incumbent LEC databases should be unbundled as network elements.[1044] This would include both incumbent LEC call processing and non-call processing databases.[1045] Most incumbent LECs counter that administrative or "back office" databases do not fall within the definition of network element in the 1996 Act.[1046] Incumbent LECs supporting this limited definition also argue that only those databases used for the routing and completion of calls are required to be unbundled by the 1996 Act.[1047]

[1041] SBC comments at 47; Sprint comments at 40 (currently provides access to its SS7 network through "A" signaling links which run from the end office to the STP and through "B" signaling links which connect the STPs of two separate SS7 networks); U S West comments at 48 (competitors should be able to provide their own transport to an STP or purchase transport from the incumbent LEC); PacTel comments at 58 (Pacific Bell proposed, before the California Commission, to unbundle its signaling links that provide interconnection between other carriers' switches or STPs to Pacific Bell's STPs).

[1042] SBC comments at 47.

[1043] SBC comments at 47.

[1044] ACSI comments at 42-44; AT&T comments at 23-26; ALTS comments at 31; MCI comments at 32-33.

[1045] ACSI comments at 42-44; ALTS comments at 31; MCI comments at 32-33 (both call processing and non-call processing databases necessary to route, complete and bill simple and complex calls should be unbundled as network elements).

[1046] Ameritech comments at 48-51; Bell Atlantic reply at 12-23; GTE reply at 21; Lincoln Tel. reply at 12; NYNEX reply at 34.

[1047] Bell Atlantic reply at 12-23; GTE reply at 21; Lincoln Tel. reply at 12; NYNEX reply at 34.

467. A number of parties urge the Commission to require incumbent LECs to provide competing carriers with the same access to their databases that they provide to themselves.[1048] Some potential local competitors argue that access to a number of existing incumbent LEC databases is important if they are to compete effectively with the incumbent LEC.[1049] Many parties, including most incumbent LECs, identify access to the Line Information Database (LIDB)[1050] and the Toll Free Calling (*i.e.*, 800, 888 numbers) database[1051] as important to the provision of local service.[1052] Some potential local competitors contend that databases are a significant expense and that they will be prohibitively costly to duplicate immediately or in the near future.[1053] The Louisiana Commission notes that it currently requires incumbent LECs to provide competitive providers with access to LIDB, Toll Free Calling, and AIN databases through signaling interconnection such that the functionality, quality, terms and conditions are equal to those the incumbent LEC provides to itself.[1054] Several incumbent LECs respond that they already provide such access to the LIDB and Toll Free Calling

[1048] ALTS comments at 31; ACSI comments at 42-43; MCI comments at 32-33; NCTA comments at 42 (competitors' customer information should be included in incumbent LEC databases on the same price, terms, and conditions as the incumbent LEC provides for itself); Teleport comments at 37; Wyoming Commission comments at 23 (nondiscriminatory access for call routing and completion); GCI comments at 13; LCI comments at 18; Vartec comments at 5.

[1049] ACSI comments at 42-43; MCI comments at 32-37. Letter from Leonard Sawicki, MCI Telecommunications to Robert Tanner, Common Carrier Bureau, FCC, July 3, 1996 (MCI July 3 *Ex Parte*). MCI identifies LIDB, Toll Free Calling, Local Number Portability and Directory Assistance databases as call processing databases necessary for new entrants to offer competitive local telephone service. *Id.*

[1050] Parties described the LIDB as a database containing information as to whether a subscriber number is a valid working line, telephone line type, call screening information and validation information for calling cards. *See* MCI July 3 *Ex Parte*. *See In the Matter of Local Exchange Carrier Line Information Database*, Report and Order, 8 FCC Rcd 7130 (1993).

[1051] Toll free calling (*i.e.*, 800, 888 numbers) is a nationwide service generally used to bill the called party. It utilizes a single national SMS and ten regional toll free calling SCP databases. Toll Free Calling SCPs are currently owned by Ameritech, Bell Atlantic, BellSouth, GTE, NYNEX, PacTel, SBC, SNET, Sprint (local), and U S West. The national SMS is owned by Bellcore and operated by a third party administrator. *See In the Matter of Toll Free Service Access Codes*, Notice of Proposed Rulemaking, 10 FCC Rcd 13692 (1995).

[1052] ACTA comments at 14; ALTS comments at 31; Ameritech comments at 47 (call routing and completion functions sometimes require supplemental calling functions or information such as 800 number routing data or credit verification); GTE comments at 24; U S West comments at 48; Bell Atlantic reply at 12-23; GTE reply at 18; NYNEX reply at 34.

[1053] AT&T comments at 23-24; NCTA comments at 42; Telecommunications Resellers Ass'n comments at 36.

[1054] Louisiana Commission comments at 5; *see* Michigan Commission comments at 12 (requires non-discriminatory access to databases necessary for the provision of local exchange service including LIDB and Toll Free Calling databases).

databases via their SS7 network.[1055] GVNW argues that all access to call-related databases must be mediated to prevent unauthorized messages from entering an incumbent's database.[1056]

468. Many potential local competitors argue that access to the incumbent LEC's LIDB should be unbundled.[1057] Most parties agree that query access to the LIDB is technically feasible.[1058] Most potential local competitors contend that they also need access to the incumbent LECs' administrative database (SMS) that is used to input customer data into the LIDB.[1059] AT&T argues that such access is technically feasible, and can be provided to competitors in the same manner that the incumbent LEC now does for itself.[1060] Other parties propose that the Commission require the incumbent LEC to input a competing carriers' customer information into its LIDB for the competitor.[1061]

469. Several parties argue that the Commission should unbundle the Toll Free Calling database for access by competitors.[1062] Most incumbent LECs commented that they already

[1055] Ameritech comments at 47; BellSouth comments at 43; GTE comments at 40; NYNEX comments at 71; Sprint comments at 40.

[1056] GVNW comment at 29; *see also* MECA comments at 38-39 (competitors should not have direct "on-line" access to incumbent databases).

[1057] ACTA comments at 14; ACSI comments at 42 (access to the LIDB is important to identify presubscribed interexchange carriers); GST comments at 25; ALTS comments at 31.

[1058] AT&T comments at 24; ALTS comments at 31; Ameritech comments at 46-51; Bell Atlantic comments at 27-28; GTE comments at 38-41; Louisiana Commission comments at 5; NCTA comments at 42; NYNEX reply at 34; Teleport comments at 37-38; U S West comments 48.

[1059] AT&T comments at 25-26; American Network Exchange comments at 5 (requesting access to LIDB, but without the current restrictions imposed by *In the Matter of Policies and Rules Concerning Local Exchange Carrier Validation and Billing Information for Joint Use Calling Cards*, CC Docket No. 91-115); ACSI comments at 42; Citizens Utilities comments at 15; NCTA comments at 42; Teleport comments at 37.

[1060] AT&T comments at 26. The conditions, (*e.g.*, type of media, electronic information transfer method) applicable to competitor interconnection with such databases should be identical to those the incumbent LEC uses for itself. *Id.*

[1061] Georgia Commission comments at 21 (under BellSouth-MCIMetro interconnection agreement, BellSouth will enter MCIMetro line information into its LIDB so as to enable MCIMetro customers to participate in alternative billing systems, such as collect calling and third number billing).

[1062] ALTS comments at 31; American Network Exchange comments at 5; ACSI comments at 43; Louisiana Commission comments at 5.

provide query access to their Toll Free Calling databases.[1063] In addition, access to the single national SMS is available under tariff administered by Bellcore.[1064]

470. Parties also argue that they need equal access to 911 and E911 services, including the underlying Automatic Location Indicator (ALI) database.[1065] Several state commissions have also asserted that such access is necessary for new entrants as well as incumbent LECs.[1066] NCTA asserts that competitors must have access to incumbent LEC systems for 911 and E911 services because currently only incumbent LECs maintain them.[1067]

471. Some competitive providers urge the Commission to require incumbent LECs to unbundle access to their AIN.[1068] Several parties argue that AIN should be unbundled to allow competitors to access the incumbent LEC's AIN physically at all points that the incumbent does for itself.[1069] Cable & Wireless argues that larger carriers may be able to design and build their own AIN technology, but smaller carriers may not be able to afford to

[1063] GTE comments at 40; Sprint comments at 40; NYNEX reply at 34. Reservation and activation of 800 and 888 numbers is available today as an unbundled tariff offering from many common carriers and independent suppliers through the RESP ORG process. *See In the Matter of Toll Free Service Access Codes*, Notice of Proposed Rulemaking, 10 FCC Rcd 13692 (1995).

[1064] Access to individual 800 and 888 numbers is achieved through the RESP ORG process administered by Bellcore. Customers contact a RESP ORG (which can be an IXC, LEC, wireless carrier, or a large organization like Westinghouse) which enters subscriber information into the 800 SMS, assigning a number to the subscriber. The SMS than loads the routing information into the SCPs, at which time the number is working and can be utilized by the subscriber. *See In the Matter of Toll Free Service Access Codes*, Notice of Proposed Rulemaking, 10 FCC Rcd 13692 (1995).

[1065] ACSI comments at 43; ALTS comments at 32; Citizens Utilities comments at 15; Comcast comments at 20; Continental comments at 19; GST comments at 25; MCI comments at 18, 33-34; NCTA comments at 42; Teleport comments at 37.

[1066] Georgia Commission comments at 19; Wyoming Commission comments at 23.

[1067] NCTA comments at 42.

[1068] Ad Hoc Telecommunications Users Committee comments at 24-25; ACTA comments at 18; ACSI at 42; Cable & Wireless comments at 23-25; CompTel comments at 43; GCI comments at 13; MCI comments at 33-34; Cable & Wireless reply at 23-24; USTN reply at 3-4. Letter from Genevieve Morelli, Vice President & general Counsel, CompTel to William Caton, Acting Secretary, FCC, June 14, 1996 (CompTel June 12 *Ex Parte*); Letter from Linda Oliver, Counsel for WorldCom to William Caton, Acting Secretary, FCC, June 14, 1996 (WorldCom June 14 *Ex Parte*).

[1069] CompTel comments at 43 (competitive providers should be able to interconnect with AIN elements at all points that ILECs interconnect currently); MCI comments at 35.

deploy all of the necessary equipment.[1070] MCI argues that access to the incumbent LEC's AIN capabilities would allow them to bring new services to the marketplace and enhance their ability to compete with the incumbent.[1071] Several commenters ask the Commission to adopt the approach of the Louisiana Commission which ordered unbundled access to incumbent LEC databases for all services that the incumbent LEC provides itself, including 800 number, LIDB, and AIN services.[1072] Sprint argues that access to AIN should be unbundled to the extent AIN is used by the incumbent LEC to provide call routing functions.[1073] Many incumbent LECs respond that AIN is still an evolving technology, and therefore it is not technically feasible for the Commission to require unbundled access.[1074] Some incumbent LECs also argue that AIN is not a signaling system or database, and therefore is not a network element under the Act.[1075]

472. A number of parties assert that currently the only technically feasible point of access to the incumbent LEC's AIN is at the incumbent LECs' SCE and SMS.[1076] Several competitive providers contend that access at the SCE and SMS would provide a competing carrier with the same ability to offer AIN-based services as the incumbent LEC without

[1070] Cable & Wireless comments at 23 (access to the incumbent LEC's existing AIN platform including the SMS database, signaling links and SCPs will allow new entrants to bring new services to the market efficiently and quickly).

[1071] MCI comments at 35.

[1072] ACSI comments at 43; CompTel comments at 43-44; MCI comments at 35 (competitive providers should stand in the same relationship to AIN components as the ILEC does when it offers AIN services to its customers).

[1073] Sprint reply at 20 n.27.

[1074] BellSouth comments at 44; SBC comments at 44; PacTel reply at 22 (*Intelligent Networks* docket contains evidence that AIN unbundling is not technically feasible).

[1075] Bell Atlantic comments at 29; Ameritech reply at 21 (arguing that because there are no services provided via AIN that are not also provided via the switch, that AIN unbundling is not necessary for competitive providers).

[1076] Ameritech comments at 49 (Ameritech claims that it has offered to provide database access via its SMS and SCE in the *Intelligent Networks* proceeding, but also argues that such access is still under development and not yet technically feasible); GTE comments at 42 (record in CC Docket No. 91-346 contains persuasive evidence that, other than access to the SMS, access to AIN network elements is neither technically nor operationally feasible at this time); Sprint comments at 41; Ameritech reply at 15 (agreeing with Sprint's position on SMS access); Bell Atlantic comments at 29-30 (as demonstrated in the *Intelligent Networks* docket, the only point at which it is technically feasible to provide AIN access is at the Service Management System level); LCI comments at 18-19.

having to recreate initially all of the AIN elements.[1077] Ericsson notes that mere unbundling of databases and signaling elements is not likely to allow competitors to create and offer competing AIN services unless they have access to both a service creation environment and service management system.[1078] Bell Atlantic asserts that AIN is not a network element within the scope of the 1996 Act, but allows that, if it were, unbundled access to the SMS should meet the requirements of section 251.[1079] BellSouth, however, contends that the Commission should not attempt to declare undefined "software building blocks" to be network elements.[1080] GVNW further argues that such access will require "partitioning" of incumbent LECs' databases to protect each carriers' information.[1081]

473. In our *Intelligent Networks* docket, several parties, including most incumbent LECs, expressed support for the Commission's proposal to require unbundled access to the SMS by third parties.[1082] Several parties argue that such access is technically feasible.[1083] Most incumbent LECs agree that, of the potential points of access to AIN proposed in our *Intelligent Networks* NPRM, access to the SMS poses the least risk of harm to the public

[1077] Ameritech comments at 49 (working on such access for third parties, although Ameritech believes it is not yet technically feasible); Bell Atlantic comments at 29 (access for third parties at the SMS would satisfy the requirements of section 251); Cable & Wireless comments at 24; Ericsson comments at 5-7; Sprint comments at 40 (access at the SMS is the only technically feasible point of interconnection for AIN that maintains network reliability); GVNW comments at 31 (competitor could create its own services in an incumbent LEC's SMS using the incumbent's SCE, which would protect the integrity of the incumbent LEC's AIN platform); LCI comments at 18 (SMS and SCE access are essential for competitors to provide advanced services).

[1078] Ericsson comments at 6.

[1079] Bell Atlantic comments at 29.

[1080] BellSouth comments at 46.

[1081] GVNW comments at 31.

[1082] *See, e.g.*, BellSouth update comments in CC Docket No. 91-346 at 6; Bell Atlantic comments in CC Docket No. 91-346 at 6; GTE comments in CC Docket No. 91-346 at 21; Central comments in CC Docket No. 91-346 at 12; SNET comments in CC Docket No. 91-346 at 5; NYNEX comments in CC Docket No. 91-346 at 3 n.3, 10-11; Siemens comments in CC Docket No. 91-346 at 2; TIA comments in CC Docket No. 91-346 at 2; MCI comments in CC Docket No. 91-346 at 10; Ericsson reply in CC Docket No. 91-346 at 2-3.

[1083] MCI comments in CC Docket No. 91-346 at 6; Siemens comments in CC Docket No. 91-346 at 2; TIA comments in CC Docket No. 91-346 at 2.

switched network.[1084] Many of these commenters argue that access to the SMS would provide competitors with an opportunity to create innovative call processing services.[1085] U S West, however, contends that, since third parties using SMS access would be dependent on incumbent LEC software at the SCE, competitors would not be satisfied with such access because it would not allow them to develop their own proprietary services.[1086] Other parties argue that SMS access will not provide significant benefits to third parties because of the limitations inherent in the service creation parameters established by the LECs.[1087]

474. Several parties argue that incumbent LEC SCP databases and AIN triggers in the incumbent LEC switch should be unbundled for a requesting carrier.[1088] Most incumbent LECs argue that sufficient mediation needs to be developed and implemented before any third party interconnection to AIN will be technically feasible.[1089] Some parties, however, counter that there is sufficient screening in the STP and that incumbent LECs should be required to accept AIN signaling messages from competitors' AIN SCP databases without additional mediation.[1090] AT&T argues that the refusal to carry AIN messages prevents competitive

[1084] Bell Atlantic comments in CC Docket No. 91-346 at 6-7; BellSouth comments in CC Docket No. 91-346 at 12, 13; GTE comments in CC Docket No. 91-346 at 19, 21; NYNEX comments in CC Docket No. 91-346 at 3; PacTel comments in CC Docket No. 91-346 at 20-21; SBC comments in CC Docket No. 91-346 at 5, 8; U S West comments in CC Docket No. 91-346 at 52; United and Central comments in CC Docket No. 91-346 at 1.

[1085] GSA comments in CC Docket No. 91-346 at 3; SNET comments in CC Docket No. 91-346 at 2; Siemens comments in CC Docket No. 91-346 at 2; TIA comments in CC Docket No. 91-346 at 2; MCI in CC Docket No. 91-346 comments at 10; Ericsson reply in CC Docket No. 91-346 at 2-3.

[1086] U S West comments in CC Docket No. 91-346 at 53; Ad Hoc Telecommunications Users Committee comments in CC Docket No. 91-346 at 11 (incumbent LECs' ability to mimic third party services created in the incumbent LEC's SCE will diminish the incentive of third parties to create new services that would co.npete with LEC AIN offerings).

[1087] AT&T comments in CC Docket No. 91-346 at 5-11 (competitors would be restricted to the particular LEC's AIN architecture and software platform, preventing the creation and deployment of unique AIN services); ALLNET comments in CC Docket No. 91-346 at 2; Ad Hoc Telecommunications Users Committee comments in CC Docket No. 91-346 at 8-9.

[1088] Ad Hoc Telecommunications Users Committee comments at 17; GCI at 12; Louisiana Commission at 5; LCI comments at 18.

[1089] BellSouth comments at 47. Mediation refers to additional screening software or devices to prevent incorrect or unacceptable AIN messages from reaching the switch or SCP database. *Id.*

[1090] ACTA comments at 21 (mediation devices will increase post dial delay and significantly increase competitors costs); CompTel comments at 45 (since section 251 unbundling is limited to telecommunications carriers, who already adhere to network security and integrity requirements as well as rigorous testing procedures, there is no need for mediation for access to AIN elements).

carriers from offering the same advanced AIN and CLASS services as the incumbent.[1091] AT&T further contends that mediation will not be necessary, because just as carriers are certified before interconnecting with other carriers' SS7 networks, carriers can be certified for AIN.[1092] Some competitors argue that a short transitional period of mediated access could be established to allow time for the adoption of standards to ensure network integrity, but only if incumbent LECs were required to use the same mediated access.[1093]

475. A few parties, including AT&T and MCI, propose unbundling of AIN in order to allow competing carriers to interconnect their own SCP database to the incumbent LECs' AIN so that competing carriers could provide call processing instructions to the incumbent LEC's switch for calls to or from its own customers.[1094] AT&T argues that this would allow it to offer different services to the customer than does the incumbent LEC, which would increase competition in the local exchange market.[1095] Ericsson admits that this is "an attractive concept which might increase competition" but argues that there are numerous technical issues that must be resolved, including billing and service interaction issues.[1096] Incumbent LECs, manufacturers and other parties argue that it is not technically feasible for a competing provider to connect its own alternative call processing database to the incumbent

[1091] AT&T reply at 20 (arguing that such a refusal violates the requirement of section 251(c)(2) for interconnection on "just, reasonable and nondiscriminatory" terms).

[1092] *See* Letter in CC Docket No. 91-346 from Bruce Cox, Government Affairs Director, AT&T, to William F. Caton, Acting Secretary, FCC, Aug. 21, 1995 (*AT&T Intelligent Networks Proposal*) Attachment at 2; *but see* PacTel reply at 22 (certification would not prevent competitors from sending erroneous messages to an incumbent LEC's AIN SCP which could lead to unauthorized changes in a customer's service or PIC).

[1093] Cable & Wireless comments at 25; MCI comments at 36; ACSI comments at 44.

[1094] ACTA comments at 21; AT&T comments at 23-25; Cable & Wireless comments at 24; MCI comments at 18, 33 (arguing that such interconnection is supported by the findings of the Information Industry Liaison Committee (IILC) Issue #026 Task Force on Long Term Unbundling); CompTel comments at 44; AT&T reply at 19-20.

[1095] AT&T comments at 23-25. AT&T admits that this arrangement would require carriers to agree upon an expanded signaling message set for AIN call processing, but it argues that such messages are already defined by Bellcore and it is the refusal of incumbent LECs' to accept them that prevents its deployment. *Id.*

[1096] Ericsson comments at 6.

LEC signaling network.[1097] Many parties, including virtually all incumbent LECs, argue against allowing a competing carrier or reseller to connect its own alternative call processing database directly to the incumbent LEC's SS7 network because of the network reliability and security issues it creates.[1098] These parties warn that requiring such unbundled access to AIN could make an incumbent LEC's switch vulnerable to inappropriate routing and billing instructions from the competitor's SCP.[1099] BellSouth argues that the *Intelligent Networks* docket supports a finding that this type of AIN unbundling is not technically feasible.[1100] Sprint contends that it could not forecast capacity needs for a competing carrier's alternative database in order to identify its own network capacity requirements.[1101] GVNW adds that any national rule requiring such a form of interconnection would require many small incumbent LECs to make uneconomic upgrades of their switches in order to accommodate it.[1102]

[1097] Sprint comments at 41 (there are significant network reliability issues involved with introducing a third party database to an SS7 network); BellSouth comments at 46 (before interconnection of a third-party database to an incumbent LEC's signaling system, more development is still needed for routing, protocol screening, call gapping, resource contention, overload control, feature interaction management and billing concerns for such an arrangement); Ericsson comments at 6 (interconnection of a third-party database to an incumbent LEC's signaling system might promote competition but there are complex technical issues to address before such a scheme could become technically feasible); Teleport comments at 37-38.

[1098] BellSouth comments at 45-46 (introduction of a third-party database to an incumbent LEC's signaling system creates the potential for fraud, sabotage, and slamming of the incumbent LEC's customers); SBC comments at 45 (record in CC Docket No. 91-346 is replete with evidence demonstrating the current technical infeasibility of interconnection of third-party databases to an incumbent LEC' signaling system); Sprint comments at 41 (cannot test for system validation and feature interaction); Teleport comments at 37-38; GVNW comments at 30-31 (such interconnection must be mediated to protect both networks from potential harm from incorrect SS7 messages).

[1099] BellSouth comments at 46; Ericsson comments at 6; TCG comments at 37-38; GTE reply at 21-22 (third-party access to AIN triggers not technically feasible without mediation because of network reliability and service integrity issues); Teleport comments at 37-38; *but see* Cable & Wireless comments at 24 (incumbent LEC arguments concerning network integrity are analogous to AT&T arguments in *Carterfone* that non-Bell System equipment could cause malfunctions in the network).

[1100] BellSouth comments at 45-46 (areas still needing resolution include routing, protocol screening, call gapping, resource contention, overload control, feature interaction management, and billing). *See also* Letter in CC Docket No. 91-346 from Karen Weis, Division Manager, AT&T, and Ben G. Almond, Executive Director, Federal Regulatory, BellSouth, to William F. Caton, Acting Secretary, FCC, Dec. 14, 1995 (*AT&T-BellSouth Intelligent Networks Joint Report*). The *AT&T-Bell South Intelligent Networks Joint Report* detailed the results of their laboratory-to-laboratory test concerning the interconnection of an AT&T SCP to BellSouth's SSP. *Id.*

[1101] Sprint comments at 41.

[1102] GVNW comments at 30-31.

476. Many parties contend that further testing of AIN is needed before further access and interconnection between carriers can be considered technically feasible.[1103] Most of the BOCs support a two year testing plan for the industry to further investigate issues relating to AIN before moving forward to third party interconnection.[1104] Several parties, however, urge the Commission to reject the LECs' proposed *Intelligent Networks* testing plan, argue that it is not necessary to ensure network integrity and that it is inconsistent with the 1996 Act.[1105] Parties opposed to the LECs' testing plan assert that it is vague and revisits work that has already been done in existing industry fora.[1106] Supporters of the LECs' testing plan, however, counter that they are willing to consider working within existing industry fora.[1107] As described in the *Intelligent Networks* docket, the LEC testing plan will take place over a two year period with final recommendations to be decided by the participants themselves. Some competitors, while allowing for the need for further testing, advocate imposing a mandatory time limit on the resolution of the outstanding mediation issues for unbundled access to AIN.[1108]

477. Some commenters believe that a Commission order to unbundle AIN functionalities would satisfy the objectives of the *Intelligent Networks* proceeding.[1109] AT&T

[1103] Bell Atlantic comments at 29 n.10; BellSouth comments at 47; Ericsson comments at 6-7; GTE comments at 42; GVNW comments at 32; Lincoln Tel. comments at 10; SBC comments at 46; U S West comments at 58.

[1104] Bell Atlantic comments at 29 n.10; BellSouth comments at 47; GTE comments at 42; Lincoln Tel. commeats at 10; SBC comments at 44 (Commission should issue order in CC Docket No. 91-346 that endorses the Tier 1 LECs' joint proposal for an industry IN project); U S West comments at 58 (industry testing plan will lead to development of non-proprietary AIN interfaces). *See* Letter in CC Docket No. 91-346 from Sandra Wagner, Director, Federal Regulatory, SBC Communications, Inc., to William F. Caton, Acting Secretary, FCC, June 23, 1995 (*LEC Intelligent Networks Proposal*). Active participants in the LEC Proposal are Bell Atlantic, GTE, PacTel, SBC and U S West. Other incumbent LECs supporting the LEC Proposal, but not currently "active" include BellSouth, Lincoln Tel., SNET, and Sprint.

[1105] Cable & Wireless comments at 26; MCI comments at 36-37. *See also* AT&T update comments in Docket 91-346 at 5-6.

[1106] MCI comments at 36-37; *but see* GTE reply at 22 (testing is necessary and is not intended for delay).

[1107] Letter in CC Docket No. 91-346 from Sandra Wagner, Director, Federal Regulatory, SBC Communications, to William Caton, Acting Secretary, FCC, May 22, 1996 (SBC May 22 *Intelligent Networks Ex Parte*). SBC contends that the Joint LEC project proposed creating a new forum directly in response to MCI's prior assertions that ATIS sponsored forums were ineffective in addressing interconnection issues. *Id.* at 4-5.

[1108] Cable & Wireless comments at 25; MCI comments at 36 (advocating that the Commission refer outstanding issues from the IILC Issue #026 consensus document to an established forum and that it should monitor progress to ensure implementation of access to the remaining interface points is accomplished within six months of the end of an initial negotiation or arbitration process).

[1109] AT&T comments at 25 n.29; Cable & Wireless comments at 26.

asserts that, if unbundled signaling explicitly includes the exchange of AIN signaling messages between incumbent LEC switches and competitor's SCPs, then the Commission does not need to pursue CC Docket No. 91-346 further because its objectives will be met in this proceeding.[1110] SBC, however, urges the Commission not to merge the *Intelligent Networks* proceeding into this docket.[1111]

c. Discussion

478. In the interconnection section above, we conclude that the exchange of signaling information between LECs necessary to exchange traffic and access call related databases was included within the interconnection obligation of section 251(c)(2).[1112] Thus, notwithstanding any obligations under section 251(c)(3), incumbent LECs are required to accept and provide signaling in accordance with the exchange of traffic between interconnecting networks. We conclude that this exchange of signaling information may occur through an STP-to-STP interconnection.

(1) Signaling Links and STP

479. We conclude that incumbent LECs, upon request, must provide nondiscriminatory access to their signaling links and STPs on an unbundled basis. We believe it is technically feasible for incumbent LECs to provide such access, and that such access is critical to entry in the local exchange market. Further, the 1996 Act requires BOCs to provide "nondiscriminatory access to databases and associated signaling necessary for call routing and completion" as a precondition for entry into in-region interLATA services.[1113] Thus, it appears that Congress contemplated the unbundling of signaling systems as network elements.

[1110] AT&T comments at 25 n.29.

[1111] SBC comments at 46 (arguing that record in CC Docket No. 91-346 is already complete).

[1112] *See supra*, Section IV. We emphasize, in Section V.J.4.c.(4), such exchange of signaling information does not include the exchange of AIN signaling information between networks for the purpose of providing AIN messages to the incumbent LEC's switch from a competitor's SCP database.

[1113] 47 U.S.C. § 271(c)(2)(B)(x). *See also* statement of Sen. Pressler, noting that "access to signaling and databases [is] important if you are going to compete and get into the market." 141 Cong. Rec. S8163 (June 12, 1995).

480. We conclude that access to unbundled signaling links and STPs is technically feasible.[1114] The majority of commenters, including incumbent LECs, agree that it is technically feasible to provide unbundled access to signaling links and STPs.[1115] Parties note that incumbent LECs and signaling aggregators already provide such access.[1116] In addition, several state commissions already require incumbent LECs to provide unbundled elements of SS7 networks.[1117] Because of the screening role played by the STP and associated network reliability concerns that were raised in the record, however, we do not require that incumbent LECs permit requesting carriers to link their own STPs directly to the incumbent's switch or call-related databases.[1118] We take a deliberately conservative approach here because of significant evidence in the record and we note that mere conclusory objections to technical feasibility would not alone be sufficient evidence.

481. Under section 251(d)(2)(A), the Commission must consider whether access to proprietary network elements is necessary.[1119] Commenters did not identify proprietary concerns with signaling protocols for the SS7 network.[1120] Moreover, in general, SS7 signaling networks adhere to Bellcore standards, rather then LEC-specific protocols and provide seamless interconnectivity between networks.[1121] Thus, we conclude that the

[1114] As discussed *infra*, we conclude that it is not technically feasible to unbundle the SCP from its associated STP, therefore, we do not require incumbent LECs to unbundle those signaling links connecting SCPs to STPs. We emphasize that we take this conservative course here because of the real evidence in the record and note that mere conclusory objections to technical feasibility will not be considered sufficient evidence of such.

[1115] *See, e.g.*, AT&T comments at 23; TIA comments at 14; U S West comments at 48; PacTel reply at 21-22.

[1116] *See, e.g.*, BellSouth comments at 43; GVNW comments at 29; NYNEX comments at 71; USTN reply at 1.

[1117] *See, e.g.*, Colorado Commission comments at 24; Michigan Commission comments at 12; Texas Commission comments at 19.

[1118] *See, e.g.*, Ameritech comments at 50; Bell Atlantic comments at 27; MCI comments at 34-35; Sprint comments at 40. We note, however, that we do not preempt those state commissions that have required incumbent LECs to do so. *See Illinois Wholesale Order*.

[1119] 47 U.S.C. § 251(d)(2)(A).

[1120] AT&T argues that there are no proprietary information issues because signaling information is generated in the incumbent LEC's switch and is provisioned entirely by the incumbent LEC. AT&T comments at 26.

[1121] A few commenters urge that we prohibit incumbent LECs from taking a proprietary interest in signaling protocols. These parties argue that such a proprietary interest conflicts with the continuing necessity for open access to signaling protocols to maintain the seamless nationwide "network of networks." *See* Frontier comments at 16 n.31; Wyoming Commission comments at 24.

unbundling of signaling links and STPs does not present proprietary concerns with respect to the incumbent LEC.

482. Under section 251(d)(2)(B), the Commission must consider whether "the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[1122] Access to signaling systems continues to be a critical element to providing competing local exchange and exchange access service. The vast majority of calls made over incumbent LEC networks are set-up and controlled by separate signaling networks. Incumbent LECs argue that access to signaling systems and associated databases is already available from other providers and therefore, they should not have to unbundle them for access by competitors.[1123] As discussed above, section 251(d)(2)(B) only relieves an incumbent LEC of its unbundling obligation if other unbundled elements in its network could provide the same service without diminution of quality. Because alternative signaling methods, such as in-band signaling, would provide a lower quality of service,[1124] we conclude that a competitor's ability to provide service would be significantly impaired if it did not have access to incumbent LECs' unbundled signaling links and STPs.

483. The purchase of unbundled elements of the SS7 network gives the competitive provider the right to use those elements for signaling between its switches (including unbundled switching elements), between its switches and the incumbent LEC's switches, and between its switches and those third party networks with which the incumbent LEC's SS7 network is interconnected. When a competitive provider purchases unbundled switching from the incumbent LEC, the incumbent LEC must provide nondiscriminatory access to its SS7 network from that switch in the same manner in which it obtains such access itself. Carriers that provide their own switching facilities should be able to access the incumbent LEC's SS7 network for each of their switches via a signaling link between their switch and an incumbent

[1122] 47 U.S.C. § 251(d)(2)(B).

[1123] *See, e.g.*, Bell Atlantic comments at 27-28; BellSouth comments at 44; GTE comments at 40-41; NYNEX comments at 71.

[1124] SS7 network signaling is critical in the provision of modern telecommunications services, allowing signaling messages to travel separately from the voice path for individual calls, increasing efficiency and making possible a host of new signaling-based services. AT&T comments at 23. Popular features like Calling Number Identification (Caller ID) and Calling Name Identification, as well as enhanced call set-up functions and such Custom Calling features as Repeat Call and Return Call, would be unavailable without SS7 capabilities. Bell Atlantic comments at Attachment 3, 17.

LEC's STP.[1125] Competitive carriers should be able to make this connection in the same manner as an incumbent LEC connects one of its own switches to the STP. This could be accomplished by the incumbent providing an unbundled signaling link from its STP to the competitor's switch or by a competitor bringing a signaling link from its switch to the incumbent LEC's STP.

(2) Call-Related Databases

484. We conclude that incumbent LECs, upon request, must provide nondiscriminatory access on an unbundled basis to their call-related databases[1126] for the purpose of switch query and database response through the SS7 network.[1127] Thus, for example, we find that it is technically feasible for incumbent LECs to provide access to the Line Information Database (LIDB), the Toll Free Calling Database and Number Portability downstream databases.[1128] The vast majority of parties, including incumbent LECs, agree that it is technically feasible to provide access to the LIDB and the Toll Free Calling databases at an STP linked to the database.[1129] Several state commissions also report that they have ordered incumbent LECs' to provide such access to the LIDB and the Toll Free Calling

[1125] Competitors should be able to interconnect their own switches to the incumbent LEC's signaling system in any technically feasible manner. Competitors may bring a signaling "A" link from their switch to the incumbent LEC's STP. CAPs use this type of connection today to connect their tandem switches to incumbent LECs' STPs. AT&T comments at 24 n.26. Competitors might also link their switch to their own STP, and then connect to an incumbent LEC's STP via a signaling "D"or "B" link.

[1126] Call-related databases are those SS7 databases used for billing and collection or used in the transmission, routing, or other provision of a telecommunications service.

[1127] Query and response access to a call-related database is intended to require the incumbent LEC only to provide access to its call-related databases as is necessary to permit a competing provider's switch (including the use of unbundled switching) to access the call-related database functions supported by that database. The incumbent LEC may mediate or restrict access to that necessary for the competing provider to provide such services as are supported by the database.

[1128] AT&T indicates that for LIDB and 800/888 database queries standard TCAP messages have been established, and reliability, security, provisioning, and billing issues have been addressed. Letter from Karen Weis, Division Manager, AT&T to William Caton, Acting Secretary, FCC, July 16, 1996 (AT&T July 16 *Ex Parte*). Bell Atlantic states that it currently provides interconnection for LIDB and 800 databases. Bell Atlantic comments at 2. Number portability "downstream databases" are defined in Part 51 of our rules as adopted by this Order. *See In the Matter of Telephone Number Portability*, First Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 95-116, FCC 96-286 (rel. July 2, 1996).

[1129] *See, e.g.*, Ameritech comments at 47; AT&T comments at 24; ALTS comments at 31; GTE comments at 40; MCI comments at 34-35; NYNEX comments at 71; U S West comments at 48.

databases.[1130] We require incumbent LECs to provide this access to their call-related databases by means of physical access at the STP linked to the unbundled database. We find that such access is critical to entry in the local exchange market.

485. We conclude that it is not technically feasible to unbundle the SCP from its associated STP. We note that the overwhelming majority of commenters contend that it is not technically feasible to access call-related databases in a manner other than by connection at the STP directly linked to the call-related database.[1131] Parties argue that the STP is designed to provide mediation and screening functions for the SS7 network that are not performed at the switch or database.[1132] We, therefore, emphasize that access to call-related databases must be provided through interconnection at the STP and that we do not require direct access to call-related databases.

486. Several commenters also identified access to call-related databases used in the incumbent's AIN to be critical to fair competition in the local market,[1133] and some state commissions have ordered incumbent LECs to provide access to AIN databases.[1134] We conclude that such access is technically feasible via an STP for those call-related databases used in the incumbent LEC's AIN.[1135] First, of course, when a new entrant purchases an incumbent's local switching element it is technically feasible for the new entrant to use the incumbent's SCP element in the same manner, and via the same signaling links, as the incumbent itself. Thus, we find no technical impediments in the record with regard to such access when a requesting carrier is also purchasing a local switching element associated with the AIN call-related database.

[1130] Louisiana Commission comments at 5; Michigan Commission comments at 12; PacTel comments at Appendix A, 7 (California Commission has required such access).

[1131] *See, e.g.*, Sprint comments at 40; AT&T reply at 19-20 n.32.

[1132] *See, e.g.*, GTE comments at 40; USTA comments at 36.

[1133] Cable & Wireless comments at 24; Citizens Utilities comments at 15; MCI comments at 32-33; TIA comments at 14; CompTel comments at 43; AT&T comments at 23-26.

[1134] Louisiana Commission comments at 5; Wyoming Commission comments at 23-24; *see also Illinois Wholesale Order*.

[1135] AT&T comments at 23-26; CompTel comments at 43; MCI comments at 36; Letter from Wendy Blueming, Regulatory Affairs and Public Policy, SNET to William Caton, Acting Secretary, FCC, July 23, 1996 (SNET July 23 *Ex Parte*); AT&T July 16 *Ex Parte*.

487. Further, we conclude that when a new entrant deploys its own switch, and links it to the incumbent LEC's signaling system, it is technically feasible for the incumbent to provide access to the incumbent's SCP to provide AIN-supported services to customers served by the new entrant's switch. Some SS7 network services resellers currently provide such access.[1136] Other potential local competitors present additional evidence supporting the technical feasibility of such access.[1137] Unlike the situation where a competitor's SCP would control the incumbent's switch (which is discussed below in section V.I.4.c.(4)), in this scenario, the incumbent's SCP will respond to and control the competitor's switch, and potential competitors that have commented in the record do not express network reliability concerns with regard to such control.[1138] Further, like the software resident in a switch, the incumbent LEC's applications resident in an SCP are merely part of the overall software and hardware making up the SCP facility. Thus, carriers purchasing access under either scenario above may use the incumbent's service applications in addition to their own.[1139]

488. Although we conclude that access to incumbent AIN SCPs is technically feasible, we agree with BellSouth that such access may present the need for mediation mechanisms to, among other things, protect data in incumbent AIN SCPs and ensure against excessive traffic volumes.[1140] In addition, there may be mediation issues a competing carrier

[1136] SNET July 23 *Ex Parte*; Letter from Stephen Kraskin, Illuminet (USTN) to Office of the Secretary, FCC July 23, 1996 (USTN July 23 *Ex Parte*).

[1137] *See* AT&T July 16 *Ex Parte*; *see also* AT&T comments at 23-26; CompTel comments at 43; MCI comments at 36.

[1138] *See* AT&T July 16 *Ex Parte*. AT&T asserts that no additional or unique reliability problems would be created that have not already been addressed and resolved by those incumbent LECs who have proposed SMS access for third parties in the Intelligent Networks proceeding. *Id.*

[1139] *See infra*, Section V.I.4.c.(3) on unbundled access to the incumbent LEC's SCE and SMS.

[1140] Letter from W.W. Jordan, Executive Director - Federal Regulatory, BellSouth to William Caton, Acting Secretary, FCC, July 16, 1996 (BellSouth July 16 *Ex Parte*) ("With a BellSouth SCP to a ALEC SSP [switch] interconnection arrangement, network reliability and security concerns, from BellSouth's perspective, would largely be limited to issues associated with traffic management."); Letter from James Smith, Director--Federal Relations, Ameritech to William Caton, Acting Secretary, FCC, July 17, 1996 (Ameritech July 17 *Ex Parte*) ("The volume of queries sent from the CLEC SSP [switch] could overload the LEC SCP, interfering with the operation of the service provided to that CLEC, or with other services which may operate on the LEC's SCP."); Letter from Joseph Mulieri, Director--FCC Relations, Bell Atlantic to Robert S. Tanner, Attorney Advisor, FCC, July 18, 1996 (Bell Atlantic July 18 *Ex Parte*). BellSouth also raises the need for mediation to prevent unauthorized modification of information within an incumbent LEC's AIN SCP database. BellSouth July 16 *Ex Parte*. Incumbent LECs' comments in this proceeding and in the IN docket generally focus on the need for mediation to prevent a competitor's database from sending inappropriate AIN signaling information to the incumbent LEC's switch (*see infra* Section V.I.4.c.(4)). *See* PacTel comments at 61-62; BellSouth comments at 45-46; Bell Atlantic comments at Appendix 3, 18-19; U S West comments in CC Docket No. 91-346 at 73-74, 84; NYNEX comments in CC Docket No. 91-346 at 14-15; SBC comments in CC Docket No. 91-346 at 8-9.

will need to address before requesting such access.[1141] Accordingly, if parties are unable to agree to appropriate mediation mechanisms through negotiations, we conclude that during arbitration of such issues the states (or the Commission acting pursuant to section 252(e)(5)) must consider whether such mediation mechanisms will be available and will adequately protect against intentional or unintentional misuse of the incumbent's AIN facilities. We encourage incumbent LECs and competitive carriers to participate in industry fora and industry testing to resolve outstanding mediation concerns.[1142] Incumbent LECs may establish reasonable certification and testing programs for carriers proposing to access AIN call related databases in a manner similar to those used for SS7 certification.[1143]

489. We recognize that providing unbundled access to AIN call-related databases at cost, and in particular providing access to the incumbent LEC's software applications that reside in the AIN databases, may reduce the incumbent's incentive to develop new and advanced services using AIN. In the near term, however, requiring entrants to bear the cost of deploying a fully redundant network architecture, including AIN databases and their application software, would constitute a significant barrier to market entry for competitive carriers. As local service markets develop, however, competition may reduce the incumbent LEC's control over bottleneck facilities and increase the importance of innovation. In those circumstances it is important that incumbent LECs have the incentive to develop unique and innovative services supported by AIN. Therefore at a later date, we will revisit the proper balance between providing unbundled access and maintaining the incentives of incumbent LECs to innovate.

490. Parties generally do not identify proprietary concerns when access to call-related databases is provided via STPs. In general, signaling protocols used to access call-related databases adhere to open Bellcore standards. Parties also do not raise proprietary concerns with specific call-related databases themselves. Today, many separate carriers access incumbent LEC Toll Free Calling and LIDB databases for the proper routing and billing of calls.[1144] Thus, we conclude that, in general, unbundled access to call-related databases does not present proprietary concerns with respect to section 251(d)(2)(A). Incumbent LECs may,

[1141] Mediation may be necessary for requesting carriers to ensure that inadvertent feature interactions, network management control and customer privacy concerns do not arise from such access. *See e.g.*, Ameritech July 17 *Ex Parte*.

[1142] *See, e.g.*, Christine Maglott, *Information Industry Liaison Committee Wrestles with Mediation Issues*, ATIS News, 3, Vol. 11, No.3, May-June, 1996.

[1143] SBC notes that carriers proposing to gain access to its SS7 network and gather information from its SCP must be certified and enter into contractual agreements for information access and proper billing. SBC comments at 47-48.

[1144] *See* AT&T July 16 *Ex Parte*.

however, present such proprietary concerns in the arbitration process with regard to specific databases, and states (or the Commission acting pursuant to section 252(e)(5)) may take action to limit unnecessary access to proprietary information.

491. We also conclude that denying access to call-related databases would impair the ability of a competing provider to offer services such as Alternative Billing Services and AIN-based services. AIN-based services represent the cutting edge of telephone exchange services, and competitors would be at a significant disadvantage if they were forced to develop their own AIN capability immediately. In addition, the record indicates that deployment of call-related databases in the near term would represent a substantial cost to new entrants. As mentioned above, incumbent LECs argue that access to certain call-related databases is already competitively available and therefore they should not have to unbundle access to them.[1145] As discussed above, however, section 251(d)(2)(B) would only relieve an incumbent LEC of its unbundling obligation if other unbundled elements in its network could provide the same service without diminution of quality. Because of the absence of such elements, we conclude that a competitor's ability to provide service would be significantly impaired if it did not have unbundled access to incumbent LECs' call-related databases, including the LIDB, Toll Free Calling, AIN, and number portability downstream databases for the purpose of switch query and database response through the SS7 network.

492. We also conclude that access to call-related databases as discussed above, and access to the service management system discussed below, must be provided to, and obtained by, requesting carriers in a manner that complies with section 222 of the Act. Section 222, which was effective upon adoption, sets out requirements for privacy of customer information. Section 222(a) provides that all telecommunications carriers have a duty to protect the confidentiality of proprietary information of other carriers, including resellers, equipment manufacturers, and customers. Section 222(b) requires that telecommunications carriers that use proprietary information obtained from another telecommunications carrier in providing any telecommunications service "shall use that information only for such purpose, and shall not use such information for its own marketing purposes."[1146] Sections 222(c) and (d) provide protection for, and limitations on the use of, and access to, customer proprietary network

[1145] We note that competitive provision of AIN SCP database services is not evidenced in the record.

[1146] 47 U.S.C. § 222(b).

information (CPNI).[1147] We note that we have initiated a proceeding to clarify the obligations of carriers with regard to section 222(c) and (d).[1148]

(3) Service Management Systems

493. Finally, we conclude that incumbent LECs should provide access, on an unbundled basis, to the service management systems (SMS), which allow competitors to create, modify, or update information in call-related databases. We believe it is technically feasible for incumbent LECs to provide access to the SMS in the same manner and method that they provide for their own access. We find that such access is necessary for competitors to effectively use call-related databases, which we have already found to be critical to entry in the local exchange market.

494. Commenters argue that they need equal access to incumbent LECs' SMSs to write or populate their own information in call-related databases.[1149] As discussed above, information bound for many call-related databases is entered first at an off-line SMS, which then downloads the information to the call-related database for real time use on the network. We find that competing provider access to the SMS is technically feasible if it is provided in the same or equivalent manner that the incumbent LEC currently uses to provide such access to itself.[1150] For example, if the incumbent LEC inputs information into the SMS using magnetic tapes, the competitive carrier must be able to create and submit magnetic tapes for the incumbent to input into the SMS in the same way the incumbent inputs its own magnetic tapes. If the incumbent accesses the SMS through an electronic interface, the competitive carrier should be able to access the SMS through an equivalent electronic interface.[1151] We further conclude that, whatever method is used, the incumbent LEC must provide the

[1147] Section 222(f)(1) defines CPNI as "information that relates to the quantity, technical configuration, type, destination, and amount of use of a telecommunications service subscribed to by any customer of a telecommunications carrier, and that is made available to the carrier by the customer solely by virtue of the carrier-customer relationship." 47 U.S.C. § 222(f)(1)(A).

[1148] *See Implementation of the Telecommunications Act of 1996: Telecommunications Carriers' Use of Customer Proprietary Network Information and other Customer Information*, Notice of Proposed Rulemaking, CC Docket No. 96-115, FCC 96-221 (rel. May 17, 1996).

[1149] AT&T comments at 26; MCI comments at 34-35.

[1150] Many carriers currently submit such information to incumbent LECs or third party SMSs. USTN reply at 1-4; Bell Atlantic comments at Attachment 3, 16; GTE comments at 40-41 n.61.

[1151] For example, access to the AIN SMS is accomplished through the SCE, which is a computer environment for the design and test of AIN based services.

competing carrier with the information necessary to correctly enter or format for entry the information relevant for input into the particular incumbent LEC SMS.

495. Specifically with respect to AIN, we find that the record in the *Intelligent Networks* proceeding supports access to the SMS.[1152] A competing carrier seeking access to the SMS that is part of the incumbent LEC's AIN would do so through the incumbent LEC's service creation environment (SCE), an interface used to design, create, and test AIN supported services. Software successfully tested in the SCE is transferred to the SMS, where it is then downloaded into an SCP database for active deployment on the network. We are persuaded that the risk of harm to the public switched network from such access to the SMS is minimized by the technical safeguards inherent in the SCE and SMS. As described in comments filed in the *Intelligent Networks* docket, competitors accessing the SCE and SMS would not communicate directly with the LEC's database or switch.[1153] We therefore conclude that such access is technically feasible, and that incumbent LECs should provide requesting carriers with the same access to design, create, test, and deploy AIN-based services at the SMS that the incumbent LEC provides for itself.[1154] While many incumbent LECs express concerns with the technical feasibility of access to AIN, we conclude that those

[1152] *See Intelligent Networks*, Notice of Proposed Rulemaking, 8 FCC Rcd 6813 (1993). In the *Intelligent Networks* proceeding, most incumbent LECs supported SMS access. *See* GTE comments in CC Docket No. 91-346 at 21; United and Central comments in CC Docket No. 91-346 at 12; SNET comments in CC Docket No. 91-346 at 5; NYNEX comments in CC Docket No. 91-346 at 3 n.3, 10-11; BellSouth update comments in CC Docket No. 91-346 at 6; Bell Atlantic comments in CC Docket No. 91-346 at 6. Other parties, including potential competitors and manufacturers, also supported SMS access. *See* Siemens comments in CC Docket No. 91-346 at 2; TIA comments in CC Docket No. 91-346 at 2; MCI comments in CC Docket No. 91-346 at 10; Ericsson reply in CC Docket No. 91-346 at 2-3. Many commenters asserted that SMS access through the SCE would provide a valuable opportunity for third parties to create services. *See* GSA comments in CC Docket No. 91-346 at 3; SNET comments in CC Docket No. 91-346 at 2; Siemens comments in CC Docket No. 91-346 at 2; Ericsson reply in CC Docket No. 91-346 at 2-3; TIA comments in CC Docket No. 91-346 at 2; MCI comments in CC Docket No. 91-346 at 10.

[1153] In their comments, BellSouth and Bell Atlantic describe the way they provide or plan to provide access to the SMS for third parties. Bell Atlantic proposes to first develop and deploy AIN services based on customer request and then subsequently to allow third parties themselves to create AIN services at a terminal either in a Bell Atlantic office or a third party office. Bell Atlantic comments in CC Docket No. 91-346 at 6. BellSouth proposes to permit third parties to use the service logic resident on BellSouth's service creation environment to create AIN services. BellSouth update reply in CC Docket No. 91-346 at 10.

[1154] Incumbent LECs that have deployed AIN must provide such access to competing carriers that will allow them to develop call processing applications pursuant to the same parameters the incumbent LEC uses itself, such as the time-of-day and origination of call parameters. BellSouth's recently proposed service to provide access to its SCE and SMS appears to be an example of the type of access to the SMS that incumbent LECs must provide to competitors upon request. *Pleading Cycle Established for Comments on BellSouth Telecommunications, Inc.'s Petition for Expedited Waiver of Part 69 Rules*, Public Notice, DA 96-27 (Jan. 17, 1996) (*BellSouth Part 69 Waiver Petition*).

concerns deal primarily with the interconnection of third party AIN SCP databases to the incumbent LEC's AIN and not access to the SCE and SMS.[1155]

496. We recognize that, although technically feasible, providing nondiscriminatory access to the SMS and SCE for the creation and deployment of AIN services may require some modifications, including appropriate mediation, to accommodate such access by requesting carriers. We note that BellSouth is currently prepared to tariff and offer such access to third parties, and other incumbent LECs, including Bell Atlantic and Ameritech, indicate that they have made significant progress towards implementing such access.[1156] Therefore, if parties are unable to agree to appropriate mediation mechanisms through negotiations, we conclude that during arbitration of such issues the states (or the Commission acting pursuant to section 252(e)(5)) must consider whether such mediation mechanisms will be available and will adequately protect against intentional or unintentional misuses of the incumbent's AIN facilities. We again encourage incumbent LECs and competitive carriers to participate in industry fora and industry testing to resolve outstanding mediation concerns.

497. Parties did identify some proprietary concerns regarding access to the SCE and SMS used in the incumbent LEC's AIN. Some incumbent LECs contend that the interface used at the SCE is proprietary in nature.[1157] GVNW argues that specific AIN-based services designed by carriers should be proprietary in nature.[1158] Competitors correctly argue that AIN can be used, not only for telecommunication services traditionally supported by the switch, but as a means to deploy advanced services not otherwise possible.[1159] We find that competing providers without access to AIN would be at a significant disadvantage to

[1155] Of the three potential points of access to AIN proposed in the *Intelligent Networks* NPRM, LEC commenters generally agree that SMS access poses the least risk of harm to the public switched telephone network. *See* Bell Atlantic comments in CC Docket No. 91-346 at 6-7; BellSouth comments in CC Docket No. 91-346 at 12, 13; GTE comments in CC Docket No. 91-346 at 19, 21; NYNEX comments in CC Docket No. 91-346 at 3; PacTel comments in CC Docket No. 91-346 at 20-21; SBC comments in CC Docket No. 91-346 at 5, 8; U S West comments in CC Docket No. 91-346 at 52; United and Central comments in CC Docket No. 91-346 at 1. Competitors also support such access. *See* MCI Comments at 6; Siemens Comments at 2; TIA Comments at 2.

[1156] *BellSouth Part 69 Waiver Petition*. BellSouth proposes to tariff services that permit third parties to create and administer AIN services through access to the SCE and SMS. Bell South's SCE/SMS service will support third-party service development with the following AIN triggers: off-hook immediate, off-hook delay, public office dialing plan, customized dialing plan, feature code and terminating attempt triggers. *Id.* *See* Bell Atlantic comments in CC Docket No. 91-346 at 6, 8; Ameritech July 17 *Ex Parte*.

[1157] U S West comments at 58 n.124 (for example, BellSouth uses DESIGNedge for such access which utilizes a proprietary database technology tailored to its network); Bell Atlantic comments at 28-29.

[1158] GVNW comments at 30 (incumbent LECs should be able to copyright AIN based services that they create or incumbents will have much less incentive to develop such services).

[1159] AT&T comments at 23-25; Cable & Wireless comments at 24; MCI comments at 18, 33.

incumbent LECs, because they could not necessarily offer the same services to the customer. This access will help competing providers without imposing costs on incumbent LECs because the entrants will pay the cost.[1160] We therefore conclude, under section 251(d)(2)(A), that access to AIN, including those elements that may be proprietary, is necessary for successful entry into the local service market.

498. Most parties generally did not identify proprietary concerns with access to those SMSs used other than for AIN. Some parties, however, argue that there are proprietary interfaces used to enter information into various databases.[1161] Competing carriers counter that competitive providers would not need to have direct access to the proprietary methods of data entry used by incumbent LECs, and as a result we conclude that the unbundled access to SMSs used for other than AIN does not present proprietary concerns with respect to section 251(d)(2)(A).[1162]

499. We also conclude that unbundled access to all SMSs is necessary for a competing provider to effectively use unbundled call-related databases. We find that the inability of competing carriers to use the SMS in the same manner that an incumbent LEC uses to input data itself would impair the ability of a competing carrier to effectively offer services to its customers using unbundled call-related databases. Commenters in the record point out that access to call-related databases alone would not allow the competing carrier to provide such services to its customers without access to an SMS.[1163] We also conclude that AIN-based services are important to a new entrant's ability to compete effectively for customers with the incumbent LEC, and in developing new business by introducing new AIN based services. Thus we conclude that a competitor's ability to provide service would be significantly impaired if it did not have unbundled access to an incumbent LEC's SMS, including access to the SMS(s) used to input data to the LIDB, Toll Free Calling, Number Portability and AIN call-related databases.

500. We reject the contention by several incumbent LECs that signaling and database access was meant by the 1996 Act to apply only to such access as is necessary for call routing and completion. Although the competitive checklist for BOC entry into in-region interLATA services under section 271 requires "nondiscriminatory access to databases and associated

[1160] *See supra*, Section VII.

[1161] AT&T June 13 *Ex Parte*.

[1162] AT&T comments at 26.

[1163] Ericsson comments at 6.

signaling necessary for call routing and completion"[1164] the definition of a network element is more comprehensive in scope. A network element as defined by the 1996 Act includes "databases" and in particular "databases sufficient for billing and collection or used in the transmission, routing, or *other* provision of a telecommunications service."[1165] We find that the inclusion of "other provision of a telecommunications service" meant Congress intended the unbundling of databases to be read broadly and could include databases beyond those directly used in the transmission or routing of a telecommunications service.

(4) Third Party Call-Related Databases

501. We find that there is not enough evidence in the record to make a determination as to the technical feasibility of interconnection of third party call-related databases to the incumbent LEC's signaling system. Some parties argue that such interconnection, including the interconnection of third party AIN SCP databases, would allow them to provide more efficient or advanced call processing and services to customers, thereby increasing their ability to compete with the incumbent LEC.[1166] AT&T and MCI specifically argue that it would be technically feasible for them to interconnect their AIN SCP database to an incumbent LEC's AIN for the purpose of providing call processing instructions to the incumbent LEC's switch.[1167] Incumbent LECs contend that such interconnection would leave their switch vulnerable to a multitude of potential harms because sufficient mediation for such interconnection does not currently exist at the STP or SCP and has not yet been developed.[1168] AT&T counters that there is no need for additional mediation and that sufficient certification and testing of AIN based services before deployment in such a fashion is technically feasible.[1169]

502. At this time, in view of this record and the record compiled in the *Intelligent Networks* docket, we cannot make a determination of the technical feasibility of such interconnection. We do, however, believe that state commissions could find such an

[1164] 47 U.S.C. § 271(c)(2)(B)(x).

[1165] 47 U.S.C. § 153(29).

[1166] AT&T comments at 23-25; Cable & Wireless comments at 24; MCI comments at 18, 33.

[1167] AT&T comments at 23-25; MCI comments at 18, 33.

[1168] *See* U S West comments in CC Docket No. 91-346 at 73-74, 84; NYNEX comments in CC Docket No. 91-346 at 14-15; SBC comments in CC Docket No. 91-346 at 8-9.

[1169] *See AT&T Intelligent Networks Proposal* Attachment at 2.

arrangement to be technically feasible and we do not intend to preempt such an order through these rules. The Illinois Commission recently ordered access to incumbent LECs' AIN that does allow for this type of interconnection.[1170] We intend to address this issue early in 1997, either in the IN docket or in a subsequent phase of this proceeding, taking into account, *inter alia*, any relevant decisions of state commissions.[1171]

503. We also address the impact on small incumbent LECs. For example, GVNW asserts that any national rule requiring this form of interconnection would require many small incumbent LECs to make uneconomic upgrades of their switches in order to accommodate it.[1172] We have considered the economic impact of our rules in this section on small incumbent LECs. Accordingly, we have not adopted any national standards concerning AIN at this time. We also note that section 251(f) provides relief for certain small LECs from our regulations implementing section 251.

5. Operation Support Systems

a. Background

504. We sought comment, in the NPRM, on whether national requirements for electronic ordering interfaces would reduce the time and resources required for new entrants to enter and compete in regional markets.[1173] We also sought comment on the unbundling of databases generally in our discussion on unbundling database and signaling systems.[1174]

b. Comments

[1170] *Illinois Wholesale Order*.

[1171] There are other additional outstanding issues from the *Intelligent Networks* proceeding that are not resolved here including direct access to the SCP and national standards for AIN access.

[1172] GVNW comments at 30-31.

[1173] NPRM at para. 89.

[1174] NPRM at paras. 107-114.

505. Several new entrants argue that incumbent LECs should be required to unbundle access to their "operations support systems" and "back-office" databases as network elements.[1175] Parties define operations support systems and back office databases generally to include those systems and databases required for pre-ordering, ordering, provisioning, maintenance and repair, and billing.[1176] Several state commissions report that they have required incumbent LECs to provide access to some of these systems and databases.[1177] Potential competitors argue that, without such access, incumbent LECs can make it extremely difficult for them to utilize unbundled network elements and resold services, thereby severely impairing their ability to compete.[1178] Competitors argue that they should be able to access such incumbent LEC systems as necessary to receive and input data.[1179] Competitors contend that such access is required by sections 251(c)(3) and 251(c)(4) as part of the terms and conditions of each section.[1180] TCC further argues that until such access is in place,

[1175] ACTA comments at 14; ACSI comments at 42-43; ALTS comments at 31; American Network Exchange comments at 5; AT&T comments at 33-39; Cable & Wireless comments at 36-37; Citizens Utilities comments at 15; CompTel comments at 31; GCI comments at 16; MCI comments at 33; TCC comments at 54-60; Teleport comments at 38-39; Vartec comments at 6-10 (incumbent LECs should unbundle access to the Billing Name and Address database); WorldCom June 14 *Ex Parte at 4-5;* CompTel June 14 *Ex Parte*.

[1176] *See* Competition Policy Institute comments at 16; GCI comments at 16; MCI comments at 18; NCTA comments at 42; Sprint comments at 17-18, 41; Teleport comments at 38-39. MCI also identifies several "back office" databases it believes are necessary to provide competitive local telephone service including, among others, Customer Record Information System (CRIS), Master Street Address Guide (MSAG), CMDS System (industry mechanism to exchange billed messages such as third-party, collect and calling cards), Telecommunications Management Network Type Database (TMN), and Number Assignment Database. MCI July 3 *Ex Parte* at 2-4.

[1177] Texas Commission comments at 19 (number assignment, ordering and repairs); In Re Petition of AT&T for the Commission to Establish Resale Rules, Rates, Terms and Conditions and the Initial Unbundling of Services, Georgia Commission Docket 6352, (Georgia Commission May 29, 1996); Order Declaring Resale Prohibitions Void and Establishing Tariff Terms, New York Commission Case 94-C-0095 and Case 95-C-0657 (New York Commission June 25, 1996).

[1178] ACSI comments at 47; AT&T comments at 33-39 (an incumbent LEC's monopoly control over operational support systems is as formidable an obstacle to market entry as its control over the network itself); Cable & Wireless comments at 36-37; Citizens Utilities comments at 15; Continental comments at 19; Sprint comments at 17-19, 22; TCC comments at 54-60 (incumbent LECs can block new entry by refusing to install "automated, nondiscriminatory systems" for ordering, installing, maintaining, repairing and billing); Teleport comments at 38-39; CompTel comments at 37-38 (such access is necessary for competitors to combine unbundled network elements into telecommunications services of their own design); Vartec comments at 7-8 (competitors will be unable to compete unless incumbent LECs provide access to unbundled billing and collection functions).

[1179] *See, e.g.*, ACSI comments at 47; MCI comments at 24.

[1180] TCC comments at 56 (section 251(c)(3) requires that unbundled network elements be provided at nondiscriminatory rates, terms and conditions, and section (c)(4) requires that services for resale be provided free of any "unreasonable or discriminatory conditions or limitations"); CompTel comments at 37 (Commission should set an aggressive, firm deadline for compliance); GCI comments at 16.

incumbent LECs will not have met the requirements of either section 251(c)(3) or (c)(4) and therefore BOCs cannot be deemed to have met the requirements of section 271(c)(2)(B)(i).[1181]

506. In contrast, most incumbent LECs argue that operations support systems do not qualify as network elements under the 1996 Act.[1182] Ameritech argues that competitors have not demonstrated that they need access to such systems in order to provide telecommunications services.[1183] Several incumbent LECs assert that an incumbent LEC may negotiate with a competitor to provide such support services, but that the 1996 Act does not require them to unbundle these systems as network elements.[1184] Other parties argue that such access is not currently technically feasible and should be resolved through the negotiations process.[1185] SBC contends that its provisioning processes are neutral with respect to competing providers of service and that provisioning for competitors does not take longer than provisioning for its own customers.[1186]

507. Several potential local competitors, including most large IXCs, urge the Commission to require incumbent LECs to provide access to their operation support systems through real-time "electronic interfaces" or "electronic bonding."[1187] AT&T argues that virtually every incumbent LEC uses automated interfaces internally to support and coordinate

[1181] TCC comments at 56-57.

[1182] BellSouth comments at 45; GTE comments at 44; U S West comments at 48; Lincoln Tel. reply at 12-14; Ameritech reply at 19-20 (only for routing, terminating, billing or providing telecommunications service); Bell Atlantic reply at 12-23 n.15 (not necessary to offer service and numerous resellers have operated in Bell Atlantic territory without such direct access); BellSouth reply at 24, n.45; GTE reply at 23; NYNEX reply at 33-34; PacTel reply at 22 (operations support systems not used in the provision of a telecommunications service). Letter from Michael Glover, General Attorney, Bell Atlantic, to William Kennard, General Counsel, FCC, April 15, 1996 (Bell Atlantic April 15 *Ex Parte*).

[1183] Ameritech comments at 19-20; NYNEX comments at 33-34 (administrative databases are not used in routing or completion of calls); Bell Atlantic reply at 14; U S West reply at 27.

[1184] NYNEX comments at 33-34; Ameritech reply at 19-20; Lincoln Tel. reply at 14 (competitors must provide their own ordering systems); Bell Atlantic April 15 *Ex Parte* at 9.

[1185] Lincoln Tel. comments at 9 (re-engineering customer service systems only for purpose of supporting competitors would be extremely profligate); GVNW comments at 10-12.

[1186] Letter from Sandra Wagner, Director, Federal Regulatory, SBC Communications, Inc. to William Caton, Acting Secretary, FCC, June 4, 1996 (SBC June 4 *Ex Parte*).

[1187] ACTA comments at 14-15; AT&T comments at 33-39; MCI comments at 33-34; Sprint comments at viii, 17-19, 22; Teleport comments at 38-39; Texas Commission comments at 19; TCC comments at 56-58 Appendix D; AT&T reply at 20-21.

functionalities such as ordering, provisioning, maintenance, and billing.[1188] TCC argues that the availability of such operational interface standards for external interaction are limited, and that incumbent LECs have powerful disincentives to develop and implement such interfaces in the absence of clear rules requiring them.[1189] Parties commented that such interfaces are necessary so that carriers relying on interconnection, unbundled network elements, or resale from the incumbent LEC can offer their customers services of the same quality as those offered by the incumbent LEC.[1190] AT&T argues that incumbent LECs must provide such access for competitors at the same level of quality and within the same intervals as they do for their own end-users so that customers do not "perceive any differences in the quality of service provided by one carrier as compared to another."[1191] Competitors contend that such interfaces need to be similar to the PIC conversion process, so that it is as easy for consumers to switch local service providers as it is to switch interexchange carriers.[1192] Teleport argues that it would be at a competitive disadvantage if it was required to use slower, more expensive manual systems while the incumbent LEC continued to use its modern and efficient systems.[1193]

508. AT&T and TCC commented on AT&T's experience in the Rochester, New York market as a reseller of Rochester Telephone's services under Rochester Telephone's Open

[1188] AT&T comments at 36-37.

[1189] TCC comments at 55.

[1190] ACTA comments at 14-15; AT&T comments at 33-39; MCI comments at 33-34; Sprint comments at viii, 17-19, 22; Teleport comments at 38-39; TCC comments at 55 (a competitor must be able to seamlessly deliver services, add features, and bill "as if it owned the facilities").

[1191] AT&T comments at 35. AT&T argues that such a requirement is supported by Commission precedent including *Policy and Rules Concerning the Furnishing of Customer Premises Equipment, Enhanced Services and Cellular Communications Services by the Bell Operating Companies*, Report and Order, 95 F.C.C. 2d 1117, 1135-36 (1983) (adopting safeguards to prevent BOCs from providing superior access, installation, and maintenance services to themselves than to competitive providers of CPE, enhanced services and cellular services); *Amendment of Sections 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry)*, Report and Order, 104 F.C.C. 2d 958, 1026-27 (1986) (requiring BOCs to provide competing enhanced service providers with comparably efficient interconnection "to control potential discrimination" by BOCs in favor of their own offerings); *id.* at 1041 (time periods for installation, maintenance, and repair must be the same for competing carriers as for BOC's own offerings).

[1192] ACTA comments at 16; AT&T comments at 35-36; CompTel comments at 3, 37; TCC comments at 54 (should be as easy for consumers to switch local service providers as it is currently to switch long distance providers). *See* Letter from Mary Brown, Director, Corporate Rates & Federal Regulatory Analysis, MCI, to William Kennard, General Counsel, FCC, Mar. 20, 1996 (*IXCs Joint Ex Parte*) at 6.

[1193] Teleport comments at 39; *accord* TCC comments at 55 (for example, an incumbent LEC could enter its own service orders electronically, but require the competing carrier to submit such orders manually via a multiple page form faxed or e-mailed to the incumbent for subsequent processing).

Market Plan.[1194] Parties noted that AT&T was required to submit a detailed order form, initially through a facsimile machine and later through e-mail, in order to resell Rochester Telephone services.[1195] AT&T asserts that it was signing up between one and two hundred new customers daily and therefore had to fax up to 1400 pages daily to Rochester Telephone.[1196] AT&T and TCC contend that such a manual process is clearly discriminatory and in violation of the 1996 Act because it creates additional delay and the potential for human error, resulting in customer dissatisfaction.[1197] TCC argues further that such a disparity in systems allows for the incumbent LEC to schedule service commencement and issue new phone numbers during the initial contact with a customer, while the competitor, at best, must put the customer on hold while it calls the incumbent LEC to obtain such information.[1198]

509. Several parties argue that electronic interfaces should provide competitors with transparent access to the underlying information rather than the individual databases necessary for ordering and provisioning, installation, maintenance and repair, recording and billing, and monitoring service.[1199] Commenters assert that large incumbent LECs may have, for example, certain information necessary for billing, stored among several databases systems, each with individual operating systems.[1200] AT&T asserts that it will be difficult and expensive for a

[1194] *See* Petition of Rochester Telephone Corp. for Approval of Proposed Restructuring Plan, Opinion and Order Approving Joint Stipulation and Agreement, Case 93-C-0103, Opinion No. 94-25 (NY Pub. Serv. Comm'n) (Nov.10, 1994); *In the Matter of Rochester Telephone Corp., Petition for Waivers to Implement its Open Market Plan*, 10 FCC Rcd 6776 (1995); *see also* Big Boys Come Calling, N.Y. Times, Oct. 19, 1995 at 1.

[1195] AT&T comments at 34-35 (AT&T had to complete a multi-page form for every individual customer that wanted to switch to AT&T and Rochester Telephone would not change a customer's service until AT&T faxed multiple documents to it); TCC comments at 55.

[1196] AT&T comments at 34 (AT&T estimated that for each customer it ordered services for, it took at least four hours for Rochester to complete and respond to AT&T).

[1197] AT&T comments at 34 (AT&T argues that the problems with a manual process were "intolerable" in the Rochester market, and would be significantly magnified in larger or more heavily populated areas); TCC comments at 55.

[1198] TCC comments at 55-56 (at worst the competing carrier must hang up with the customer and call back later with the necessary information).

[1199] AT&T comments at 33-39; Telecommunications Resellers Ass'n comments at 22 n.52-53; TCC comments at 56 -57 (electronic interface capabilities should allow competitors, *inter alia*, to enter customer trouble reports, obtain report commitments, schedule customer site visits and receive notification of network conditions affecting service); Letter from Antoinette Cook Bush, Counsel, Ameritech to William Caton, Acting Secretary, FCC, July 10, 1996 (Ameritech July 10 *Ex Parte*). Ameritech argues that, once operational interfaces are in place, it will be unnecessary for carriers to provide competitors with direct access to the underlying systems or databases providing such functions. *Id.* at 5.

[1200] AT&T comments at 33-39.

competing carrier to individually access multiple systems and that the difficulty and expense will be compounded for parties wishing to compete in several incumbent LECs' territories.[1201] AT&T contends, therefore, that incumbent LECs should create and deploy a "gateway" to all of their internal operations support systems and databases so that a competing carrier could use one method of access to the underlying information.[1202] U S West contends that competitors must develop systems that are compatible with incumbent LEC electronic interfaces and argues that incumbent LECs should not be required to develop individualized systems for each competing carrier.[1203]

510. Since the passage of the 1996 Act, several states have proceeded to implement rules for local competition, several of which include provisions concerning electronic interfaces.[1204] The Georgia Commission ordered BellSouth to establish electronic operational interfaces by July 15, 1996, and ordered both incumbent BellSouth and requesting carrier AT&T to submit a joint report to the commission within thirty days concerning the implementation schedule necessary to deploy such interfaces.[1205] After a motion for reconsideration, the Georgia Commission provided BellSouth with an additional month to establish these interfaces and added additional deadlines for the deployment and operation of such interfaces.[1206] The Illinois Commission ordered Ameritech and Centel to provide competitors with "all operational interfaces at parity with those provided their own retail

[1201] *Id.*

[1202] *Id.*

[1203] Letter from Cyndie Eby, Executive Director -- Federal Regulatory, U S West to Robert Tanner, Attorney Advisor, FCC, July 9, 1996 (U S West July 9 *Ex Parte*).

[1204] Letter from Bruce Cox, Government Affairs Director, AT&T to William Caton, Acting Secretary, FCC, July 11, 1996 (AT&T July 11 *Ex Parte*). AT&T submitted orders or rules from eight states that have taken action on the issue of electronic interfaces. *Id.*

[1205] Petition of AT&T for the Commission to Establish Resale Rules, Rates, Terms and Conditions and the Initial Unbundling of Services, Docket No. 6352-U at 11-12, 15 (Georgia Commission May 29, 1996). The Georgia Commission ordered BellSouth to establish interfaces for "pre-service ordering, service ordering and provisioning, directory listing and line information databases, service trouble reporting, and daily usage data." *Id.* at 15.

[1206] Motion for Reconsideration in Docket No. 6352-U (Georgia Commission July 2, 1996). The Georgia Commission directed that most electronic interfaces must be fully operational by the end of 1996, and established March 31, 1997 as an absolute deadline. *Id.*

customers."[1207] The Louisiana Commission has proposed rules on local competition that require incumbent LECs to deploy systems for competitors that are equivalent to those used by incumbents for their own retail exchange services.[1208] Under those rules, such access must be equal to that provided to an incumbent LECs' own personnel.[1209] The California Commission adopted interim rules ordering incumbent LECs to deploy automated on-line systems for access by competitors.[1210] The Indiana Commission concluded that a competitor's ability to utilize "electronic access, technical interfaces, or access to databases to place service orders, receive phone number assignments, receive information necessary to bill [its] customers and to inform the incumbent LEC of cases of trouble" is essential to the development of resale competition.[1211] Indiana ordered incumbent LECs to provide all operational interfaces at parity with those the incumbent provides to its own retail customers.[1212] The Ohio Commission's rules on local competition require all LECs to provide "nondiscriminatory, automated operational support systems" that support access by competing carriers to such functions as pre-ordering, ordering, provisioning, repair and maintenance, number assignment, and billing.[1213] The Oklahoma Commission has proposed rules that require an incumbent LEC, to the extent it provides itself, its affiliates or subsidiaries,

[1207] *Illinois Wholesale Order*. The Illinois Commission ordered both incumbent LECs, to the extent they could not "fully and immediately" implement operational parity, to submit a plan with specific timetables for achieving compliance. *Id.* at 51.

[1208] Substitute Proposed Regulations for Competition in the Local Telecommunications Market, Docket No. U-20883 (Louisiana Commission March 5, 1996). The Louisiana Commission further requires "direct on-line access" to incumbent LECs' mechanized order entry system, number administration system, trouble reporting and monitoring system, customer usage data, and local listing databases. *Id.*

[1209] *Id.*

[1210] Order Instituting Rulemaking on the Commission's Own Motion into Competition for Local Exchange Service, R. 95-04-043 and I. 95-04-044 (California Commission April 26, 1995). The California Commission ordered such access for "service ordering and implementation scheduling." *Id.* at Appendix E, 14.

[1211] In the Matter of the Investigation on the Commission's Own Motion into Any and All Matters Relating to Local Telephone Exchange Competition Within the State of Indiana, Cause No. 39983, Interim Order on Bundled Resale and Other Issues (Indiana Commission July 1, 1996).

[1212] *Id.* at 49. The Commission also ordered incumbents Ameritech and GTE, to the extent they contend that they are unable to fully and immediately implement operational parity, to submit a comprehensive plan with specific timetables for achieving compliance. *Id.*

[1213] In the Matter of the Commission Investigation Relative to the Establishment of Local Exchange Competition and Other Competitive Issues, Case No. 95-845-TP-COI (Ohio Commission June 12, 1996).

automated interfaces for the purpose of service ordering, maintenance or repair, to make such interfaces available to competitors.[1214]

511. A few incumbent LECs commented on their own efforts to develop and implement electronic interfaces, including development of a single gateway for competing carrier access. Ameritech contends that "operational interfaces are essential to promote viable competitive entry."[1215] Bell Atlantic states that it currently provides ordering and repair information to IXCs and is working on implementing similar electronic interfaces for competing local carriers.[1216] GTE commented that it supports access to its trouble administration information for AT&T and MCI.[1217] U S West also supports trouble administration electronic access for AT&T and MCI and is developing access to all of its operations support systems for IXCs.[1218] U S West also states that it expects to build on such access for IXCs to develop access to meet the needs of local competitors.[1219] NYNEX also provides currently for electronic access for IXCs to its operations support systems for presubscription, ordering and provisioning, trouble administration, and access billing.[1220] NYNEX, which has been ordered by the New York Commission to provide electronic

[1214] All Sources Proposed Rules,Docket No. RM950000019 (Local Telephone Competition) (Oklahoma Commission March 7, 1996). Oklahoma rules clarify that such interfaces should not permit competitors to directly access the incumbent's underlying systems. *Id.* at 79.

[1215] Ameritech July 10 *Ex Parte*.

[1216] Letter from Patricia Koch, Assistant Vice President, Federal External Affairs and Regulatory Relations, Bell Atlantic, to William Caton, Acting Secretary, FCC, June 21, 1996 (Bell Atlantic June 21 *Ex Parte*).

[1217] GTE reply at 23 n.31 (GTE provides electronic bonding for trouble administration to both AT&T and MCI).

[1218] Letter from Cyndie Eby, Executive Director-Federal Regulatory to William Caton, Acting Secretary, FCC, June 28, 1996 (U S West June 28 *Ex Parte*). U S West supports a mediated electronic interface for IXCs to submit trouble reports to U S West. *Id.*

[1219] U S West July 9 *Ex Parte*.

[1220] Letter from Alan Cort, Director, Federal Regulatory Matters, NYNEX to William Caton, Acting Secretary, FCC, July 12, 1996 (NYNEX July 12 *Ex Parte*). Such electronic access can be achieved through "a stand alone PC with a dial up modem, or through a customer's [IXC's] network to allow network to network connectivity." *Id.*

interfaces for local competitors by October 1, 1996,[1221] recently proposed to expand the use of its current electronic access for IXCs to local competitors.[1222]

512. Sprint and MCI argue that current use of electronic interfaces, including the Customer Account Record Exchange (CARE) system used by LECs and IXCs to exchange subscriber account information electronically, is evidence of the technical feasibility of electronic bonding.[1223] TCC urges the Commission to require the provision of timely and accurate CARE by all local service providers to all IXCs.[1224] Vartec asserts that incumbent LECs and IXCs already share access to the Billing Name and Address (BNA) database.[1225] TCC argues that all local service providers should be required to continue to support the standard interface that exists today for IXCs to request BNA information to complete the billing process for its customers.[1226] In addition, TCC notes that competing carriers purchasing unbundled local switching from the incumbent LEC will require access to billing data to bill IXCs for exchange access.[1227]

513. Several commenters advocate national standards for electronic interfaces.[1228] Ameritech asserts that "[t]he ability to do business between multiple local exchange carriers and incumbent LECs dictates that these electronic interfaces adhere to national or industry-based standards where available."[1229] Sprint proposes that the Commission require industry to

[1221] Order Declaring Resale Prohibitions Void and Establishing Tariff Terms, Case 94-C-0095, *et. al*, (New York Commission June 25, 1996).

[1222] Letter from Alan Cort, Director, Federal Regulatory Matters, NYNEX to William Caton, Acting Secretary, FCC July 17, 1996 (NYNEX July 17 *Ex Parte*). NYNEX will provide competing providers with access to its Direct Customer Access System. It is currently testing local service applications with potential new entrants. *Id.*

[1223] MCI comments at 18; Sprint comments at 17; TCC comments at 58 n.60 (currently there are approximately 56 million CARE transactions annually).

[1224] TCC comments at 58 (CARE information includes a customer's billing telephone number, working telephone number, billing address and service address).

[1225] Vartec comments at 8-9.

[1226] TCC comments at 58-59.

[1227] TCC comments at 59.

[1228] AT&T comments at 36-39; Cable & Wireless comments at 36-37; Teleport comments at 38-39.

[1229] Ameritech July 10 *Ex Parte* at 5.

develop such standards and incumbent LECs to implement those standards within twelve months.[1230] AT&T argues that, while industry has primary responsibility for developing standards, section 256(b)(1) establishes an "oversight" responsibility for the Commission in the development of such industry standards.[1231] American Communications Services argues that such standards should conform to Bellcore and ANSI requirements as well as relevant industry guidelines and manufacturer specifications.[1232] Ameritech asserts that, if an ANSI or other national or industry-based standard exists, incumbent LECs should have a duty to conform their electronic interfaces to those standards within a reasonable period of time.[1233] Sprint reports that industry has been working on developing standards for electronic interfaces in the Electronic Communications Implementation Committee (ECIC),[1234] a working committee in the Telecommunications Industry Forum of the Alliance for Telecommunications Industry Solutions (ATIS).[1235] The ECIC defines electronic bonding as "interactive electronic information exchange involving application-to-application communications between telecommunications jurisdictions" supporting operations, administration, maintenance, and provisioning.[1236] The ECIC has already developed guidelines for a "Trouble Administration" application and is close to completing those for an "Interexchange Carrier/Customer Account

[1230] Sprint comments at 18. *See also* AT&T comments at 38. AT&T urges the Commission to direct industry to work towards developing such standards, set a date for their implementation and make it clear to incumbent LECs that such standards are a necessary part of meeting the requirements of sections 251(c)(3) and (c)(4). *Id.*

[1231] AT&T comments at 38.

[1232] ACSI comments at 47; *see* Ameritech July 10 *Ex Parte* at 5. Ameritech adds that the telecommunications industry has the responsibility to develop its own standards through existing bodies such as ANSI. *Id.*

[1233] Ameritech July 10 *Ex Parte* at 5.

[1234] ECIC was formerly known as the Electronic Bonding Implementation Team (EBIT) before becoming a working committee of ATIS.

[1235] Letter from Jay Keithley, Vice President, Law & External Affairs, Sprint , to William F. Caton, Acting Secretary, FCC, June 25, 1996 (Sprint June 25 *Ex Parte*). Current active members of the ECIC include: Ameritech, AT&T, Bell Atlantic, BellSouth, Cincinnati Bell, DSET, GTE, MCI, NYNEX, Objective Systems Integrators, OpenCon Systems, Pacific Bell, Pirelli Cable, SNET, Southwestern Bell, Sprint, Touch of Gray Engineering, Telegenics, Teleport, and U S West. *Id. See also* Letter from Todd Silbergeld, Director--Federal Regulatory, SBC Communications to William Caton, Acting Secretary, FCC (July 12, 1996) (SBC July 12 *Ex Parte*).

[1236] Sprint June 25 *Ex Parte*.

Record Exchange" application.[1237] A few incumbent LECs identified the "Electronic Data Interchange (EDI)" standard as a potential basis for electronic interfaces.[1238] Several parties also commented that the Ordering and Billing Forum (OBF) is working on developing standards for electronic interfaces.[1239] SBC and NYNEX note that ECIC, OBF, EDI and the T1M1 standards committees[1240] are all working in conjunction to develop electronic interfaces for inter-telecommunications company transactions.[1241]

514. AT&T argues that a national standard for electronic interfaces should provide for a uniform method of access to underlying information by competing carriers to all incumbent LECs. As envisioned by AT&T, such a gateway would provide transparent access for all competing local exchange providers to incumbent LEC administrative and back office databases. Bell Atlantic and AT&T together agree that, given "appropriate guidance from the Commission, the industry can achieve consensus on sufficient data elements and formatting conventions to facilitate that 95% of all inter-telecommunications company transactions may be processed via electronic gateways within twelve months."[1242] Bell Atlantic and AT&T argue that "transaction sets"[1243] to facilitate the exchange of information across electronic

[1237] Sprint June 25 *Ex Parte*. The ECIC will next work on a "Ordering/Provisioning" application. It has identified but not yet established priorities for other applications including: Performance Monitoring, Alarm Monitoring, Network Management, Traffic Management, Testing and Reporting, Ordering Competitive LEC Services (including Resale), Ordering SONET, Product Availability/Capability, Electronic Bonding for Government and Large Customers, and Intercompany Billing. *Id. See also* U S West July 9 *Ex Parte*.

[1238] Ameritech July 10 *Ex Parte* at 5-6. EDI is defined by the Telecommunications Industry Forum. *Id. at 6.*

[1239] AT&T comments at 38; BellSouth reply at 27; Ameritech July 10 *Ex Parte* at 5. An electronic ordering interface could be based on the "access service request" defined by OBF. Billing information could be exchanged via the "exchange message interface" or the "exchange message record" also defined by OBF. Ameritech July 10 *Ex Parte* at 5-6.

[1240] T1M1 is a standards committee under the T1 Telecommunications committee, and is a part of ATIS.

[1241] SBC July 12 *Ex Parte*; NYNEX July 17 *Ex Parte*.

[1242] Letter from Bruce Cox, Government Affairs Director to William Caton, Acting Secretary, FCC, July 3, 1996 (*AT&T-Bell Atlantic Joint Ex Parte*). This language was also supported by Beechwood Data Systems, a systems integrator company working with, among others, AT&T and NYNEX on electronic interfaces.

[1243] A "transaction set" refers to a set of standard data elements necessary to support any electronic exchange of information for a particular function, like provisioning.

interfaces need to be created to support the functions of pre-ordering and ordering,[1244] provisioning,[1245] repair and maintenance,[1246] and billing.[1247] AT&T commented that electronic interfaces are scalable to different size entities, so that any phone company with at least a PC computer and a modem can utilize one of their applications.[1248]

515. Several state commissions commented that they are not opposed to national standards but want the flexibility to implement additional or different state standards.[1249] The Colorado Commission believes national technical standards are a worthy goal, but they must carefully consider differences in regional and network conditions.[1250] The California Commission, however, contends that incumbent LEC provisioning systems vary considerably by company and region.[1251] Incumbent LECs argue that there should be no national standards for the provision, maintenance and repair of network elements because operating and administrative systems differ between incumbent LECs.[1252]

[1244] Pre-ordering and ordering includes the exchange of information between LECs about current or proposed customer products and services or unbundled network elements or some combination thereof. *AT&T-Bell Atlantic Joint Ex Parte*. TCC includes such information as customer data on current services, and credit and payment history. TCC comments at 57 n.58, Appendix D.

[1245] Provisioning involves the exchange of information between LECs where one executes a request for a set of products and services or unbundled network elements or combination thereof from the other with attendant acknowledgements and status reports. *AT&T-Bell Atlantic Joint Ex Parte.*

[1246] Maintenance [and repair] involves the exchange of information between LECs where one initiates a request for repair of existing products and services or unbundled network elements or combination thereof from the other with attendant acknowledgements and status reports. *AT&T-Bell Atlantic Joint Ex Parte.*

[1247] Billing involves the provision of appropriate usage data by one LEC to another to facilitate customer billing with attendant acknowledgements and status reports. It also involves the exchange of information between LECs to process claims and adjustments. *AT&T-Bell Atlantic Joint Ex Parte.*

[1248] Letter from Bruce Cox, Government Affairs Director, AT&T to William Caton, Acting Secretary, FCC, July 1, 1996 (AT&T July 1 *Ex Parte*).

[1249] Pennsylvania Commission comments at 25; *but see* California Commission comments at 26-28 (standards could hinder innovation and efficiency).

[1250] Colorado Commission comments at 24-25, 27.

[1251] California Commission comments at 27 (the two biggest incumbent LECs in California have significant differences in how they provision and operate their network).

[252] Bell Atlantic comments at 31; PacTel comments at 40-44 (Commission could order standards for similarly situated networks but there will be many differences between incumbent LECs' ordering and billing systems); NYNEX reply comments at 32-33 (arguing that there are also differences in incumbent LECs' test equipment).

c. Discussion

516. We conclude that operations support systems and the information they contain fall squarely within the definition of "network element" and must be unbundled upon request under section 251(c)(3), as discussed below. Congress included in the definition of "network element" the terms "databases" and "information sufficient for billing and collection or used in the transmission, routing, *or other provision* of a telecommunications service."[1253] We believe that the inclusion of these terms in the definition of "network element" is a recognition that the massive operations support systems employed by incumbent LECs, and the information such systems maintain and update to administer telecommunications networks and services, represent a significant potential barrier to entry. It is these systems that determine, in large part, the speed and efficiency with which incumbent LECs can market, order, provision, and maintain telecommunications services and facilities. Thus, we agree with Ameritech that "[o]perational interfaces are essential to promote viable competitive entry."[1254]

517. Nondiscriminatory access to operations support systems functions can be viewed in at least three ways. First, operations support systems themselves can be characterized as "databases" or "facilit[ies] . . . used in the provision of a telecommunications service," and the functions performed by such systems can be characterized as "features, functions, and capabilities that are provided by means of such facilit[ies]."[1255] Second, the information contained in, and processed by operations support systems can be classified as "information sufficient for billing and collection or used in the transmission, routing, or other provision of a telecommunications service."[1256] Third, nondiscriminatory access to the functions of operations support systems, which would include access to the information they contain, could be viewed as a "term or condition" of unbundling other network elements under section 251(c)(3), or resale under section 251(c)(4). Thus, we conclude that, under any of these interpretations, operations support systems functions are subject to the nondiscriminatory access duty imposed by section 251(c)(3), and the duty imposed by section 251(c)(4) to provide resale services under just, reasonable, and nondiscriminatory terms and conditions.

518. Much of the information maintained by these systems is critical to the ability of other carriers to compete with incumbent LECs using unbundled network elements or resold services. Without access to review, *inter alia*, available telephone numbers, service interval

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[1253] 47 U.S.C. § 153(29) (emphasis added).

[1254] Ameritech July 10 *Ex Parte* at 5.

[1255] 47 U.S.C. § 153(29).

[1256] *Id.*

information, and maintenance histories, competing carriers would operate at a significant disadvantage with respect to the incumbent. Other information, such as the facilities and services assigned to a particular customer, is necessary to a competing carrier's ability to provision and offer competing services to incumbent LEC customers.[1257] Finally, if competing carriers are unable to perform the functions of pre-ordering, ordering, provisioning, maintenance and repair, and billing for network elements and resale services in substantially the same time and manner that an incumbent can for itself, competing carriers will be severely disadvantaged, if not precluded altogether, from fairly competing. Thus providing nondiscriminatory access to these support systems functions, which would include access to the information such systems contain, is vital to creating opportunities for meaningful competition.

519. As noted in the comments above, several state commissions have ordered real-time access or have ongoing proceedings working to develop and implement it within their jurisdictions. The New York Commission, building on its pioneering experience with the Rochester Telephone "Open Market Plan," has facilitated a working group on electronic interfaces comprised of both incumbent LECs and potential competitors.[1258] The New York Commission focused on these issues in response to the frustrations and concerns of resellers in the Rochester market.[1259] In particular, AT&T alleged that it was "severely disadvantaged due to the fact that [Rochester Telephone] has failed to provide procedures for resellers to access [their] databases for on-line queries needed to perform basic service functions [such] as scheduling customer appointments."[1260] The New York Commission has concluded that wherever possible NYNEX will provide new entrants with real-time electronic access to its systems.[1261] As another example, the Georgia Commission recently ordered BellSouth to provide electronic interfaces such that resellers have the same access to operations support systems and informational databases as BellSouth does, including interfaces for pre-ordering,

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[1257] For these reasons, it is most important that incumbent LECs, which currently own the overwhelming majority of local facilities in any market provide this information to those new entrants who initially will rely to varying degrees on incumbent LEC facilities. *See e.g.*, AT&T comments at 33-34.

[1258] Order Declaring Resale Prohibitions Void and Establishing Tariff Terms, Case 94-C-0095, *et. al.* (New York Commission June 25, 1996).

[1259] Order Declaring Resale Prohibitions Void and Establishing Tariff Terms, Case 94-C-0095, *et. al.* (New York Commission June 25, 1996). In New York proceeding, resellers argued that interfaces were as important to competition as the level of the wholesale discount. *Id.*

[1260] AT&T Communications of New York, Inc. Complaint, Petition for Declaratory Judgement and for Reconsideration of Opinion No. 94-25 New York Commission, page 12.

[1261] *Id.* at 13-14. The New York Commission operations working group has focused on five areas for implementation: (1) service ordering, (2) trouble administration, (3) credit and collection, (4) billing and usage detail, (5) local exchange company requirements. *Id.* at 13-17.

ordering and provisioning, service trouble reporting, and customer daily usage.[1262] In testimony before the Georgia Commission, a BellSouth witness acknowledged that "[n]o one is happy, believe me, with a system that is not fully electronic."[1263] As noted above, Georgia ordered BellSouth to establish these interfaces within two months of its order (by July 15, 1996), but recently extended the deadline an additional month (to August 15th).[1264] Both the Illinois and Indiana Commissions ordered incumbent LECs immediately to provide to competitors access to operational interfaces at parity with those provided to their own retail customers, or submit plans with specific timetables for achieving such access.[1265] Several other states have passed laws or adopted rules ordering incumbent LECs to provide interfaces for access equal to that the incumbent provides itself.[1266] We recognize the lead taken by these states and others, and we generally rely upon their conclusions in this Order.

520. We conclude that providing nondiscriminatory access to operations support systems functions is technically feasible. Incumbent LECs today provide IXCs with different types of electronic ordering or trouble interfaces that demonstrate the feasibility of such access, and perhaps also provide a basis for adapting such interfaces for use between local service providers.[1267] Further, as discussed above, several incumbent LECs, including NYNEX and Bell Atlantic, are already testing and operating interfaces that support limited functions, and are developing the interfaces to support access to the remaining functions identified by most potential competitors.[1268] Some incumbent LECs acknowledge that

[1262] *See* In Re Petition of AT&T for the Commission to Establish Resale Rules, Rates, Terms and Conditions and the Initial Unbundling of Services, Docket 6352, (Georgia Commission May 29, 1996).

[1263] *Id.*

[1264] Motion for Reconsideration in Docket No. 6352-U (Georgia Commission July 2, 1996).

[1265] In the Matter of the Investigation on the Commission's Own Motion into Any and All Matters Relating to Local Telephone Exchange Competition Within the State of Indiana, Cause No. 39983, Interim Order on Bundled Resale and Other Issues (Indiana Commissions July 1, 1996); *Illinois Wholesale Order.*

[1266] *See e.g.*, Texas Commission comments at 19; In the Matter of the Commission Investigation Relative to the Establishment of Local Exchange Competition and Other Competitive Issues, Case No. 95-845-TP-COI (Ohio Commission June 12, 1996); Order Instituting Rulemaking on the Commission's Own Motion into Competition for Local Exchange Service, R. 95-04-043 and I. 95-04-044 (California Commission April 26, 1995).

[1267] *See, e.g.*, Bell Atlantic June 21 *Ex Parte*; NYNEX July 12 *Ex Parte*; NYNEX July 17 *Ex Parte*; U S West June 28 *Ex Parte*; U S West July 9 *Ex Parte.*

[1268] Bell Atlantic June 21 *Ex Parte*; NYNEX July 17 *Ex Parte.*

nondiscriminatory access to operations support systems functions is technically feasible.[1269] Finally, several industry groups are actively establishing standards for inter-telecommunications company transactions.[1270]

521. Section 251(d)(2)(A) requires the Commission to consider whether "access to such network elements as are proprietary in nature is necessary."[1271] Incumbent LECs argue that there are proprietary interfaces used to access these databases and information. Parties seeking to compete with incumbent LECs counter that access to such databases and information is vitally important to the ability to broadly compete with the incumbent. As discussed above, competitors also argue that such access is necessary to order, provision, and maintain unbundled network elements and resold services, and to market competing services effectively to an incumbent LEC's customers. We find that it is absolutely necessary for competitive carriers to have access to operations support systems functions in order to successfully enter the local service market.

522. Section 251(d)(2)(B) requires the Commission to consider whether "the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[1272] As mentioned above, parties identified access to operations support systems functions as critical to the provision of local service. We find that such operations support systems functions are essential to the ability of competitors to provide services in a fully competitive local service market. Therefore, we conclude that competitors' ability to provide service successfully would be significantly impaired if they did not have access to incumbent LECs' operations support systems functions.

523. We thus conclude that an incumbent LEC must provide nondiscriminatory access to their operations support systems functions for pre-ordering, ordering, provisioning, maintenance and repair, and billing available to the LEC itself.[1273] Such nondiscriminatory

[1269] *See* NYNEX reply at 33-34; GTE reply at 23 n.28; Bell Atlantic reply at 14.

[1270] Industry standards committees include ECIC, EDI, OBF and T1M1. *See* Ameritech July 10 *Ex Parte*, Sprint June 25 *Ex Parte*, NYNEX July 17 *Ex Parte.*

[1271] 47 U.S.C. § 251(d)(2)(A).

[1272] 47 U.S.C. § 251(d)(2)(B).

[1273] We adopt the definition of these terms as set forth in the *AT&T-Bell Atlantic Joint Ex Parte* as the minimum necessary for our requirements. We note, however, that individual incumbent LEC's operations support systems may not clearly mirror these definitions. Nevertheless, incumbent LECs must provide nondiscriminatory access to the full range of functions within pre-ordering, ordering, provisioning, maintenance and repair and billing enjoyed by the incumbent LEC.

access necessarily includes access to the functionality of any internal gateway systems[1274] the incumbent employs in performing the above functions for its own customers. For example, to the extent that customer service representatives of the incumbent have access to available telephone numbers or service interval information during customer contacts, the incumbent must provide the same access to competing providers. Obviously, an incumbent that provisions network resources electronically does not discharge its obligation under section 251(c)(3) by offering competing providers access that involves human intervention, such as facsimile-based ordering.[1275]

524. We recognize that, although technically feasible, providing nondiscriminatory access to operations support systems functions may require some modifications to existing systems necessary to accommodate such access by competing providers.[1276] Although, as discussed above, many incumbent LECs are actively developing these systems, even the largest and most advanced incumbent LECs have not completed interfaces that provide such access to all of their support systems functions. State commissions such as Georgia, Illinois, and Indiana, however, have ordered that such access be made available to requesting carriers in the near term. As a practical matter, the interfaces developed by incumbents to accommodate nondiscriminatory access will likely provide such access for services and elements beyond a particular state's boundaries, and thus we believe that requirements for such access by a small number of states representing a cross-section of the country will quickly lead to incumbents providing access in all regions.

525. In all cases, however, we conclude that in order to comply fully with section 251(c)(3) an incumbent LEC must provide, upon request, nondiscriminatory access to operations support systems functions for pre-ordering, ordering, provisioning, maintenance and repair, and billing of unbundled network elements under section 251(c)(3) and resold services under section 251(c)(4). Incumbent LECs that currently do not comply with this requirement of section 251(c)(3) must do so as expeditiously as possible, but in any event no later than January 1, 1997.[1277] We believe that the record demonstrates that incumbent LECs and several national standards-setting organizations have made significant progress in developing

[1274] A gateway system refers to any electronic interface the incumbent LEC has created for its own use in accessing support systems for providing pre-ordering, ordering, provisioning, repair and maintenance, and billing.

[1275] Such access was all that Rochester Telephone provided to AT&T, when AT&T attempted to compete as a reseller of Rochester Telephone service. *See* Letter from Bruce Cox, Government Affairs Director, AT&T to William Caton, Acting Secretary, FCC, July 10, 1996 (AT&T July 10 *Ex Parte*).

[1276] *See supra*, Section V.G. regarding accommodation of unbundling.

[1277] *See infra*, Section VII.B. for a discussion of exemptions and suspensions for small and rural incumbent LECs.

such access. This progress is also reflected in a number of states requiring competitor access to these transactional functions in the near term. Thus, we believe that it is reasonable to expect that by January 1, 1997, new entrants will be able to compete for end user customers by obtaining nondiscriminatory access to operations support systems functions.

526. We have considered the economic impact of our rules in this section on small incumbent LECs. For example, RTC urges us to recognize the differences between carriers in regards to computerized network administration and operational interfaces. Our requirement of nondiscriminatory access to operations support systems recognizes that different incumbent LECs possess different existing systems. We also note, however, that section 251(f) of the 1996 Act provides relief for certain small LECs from our regulations implementing section 251.

527. Ideally, each incumbent LEC would provide access to support systems through a nationally standardized gateway. Such national standards would eliminate the need for new entrants to develop multiple interface systems, one for each incumbent. We believe that the progress made by standards-setting organizations to date evidences a strong national movement toward such a uniform standard.[1278] For example, both AT&T and Bell Atlantic agree that, given appropriate guidance from the Commission, the industry can achieve consensus on national standards such that within 12 months 95% of all inter-telecommunications company transactions may be processed via nationally standardized electronic gateways.[1279]

528. In order to ensure continued progress in establishing national standards, we propose to monitor closely the progress of industry organizations as they implement the rules adopted in this proceeding. Depending upon the progress made, we will make a determination in the near future as to whether our obligations under the 1996 Act require us to issue a separate notice of proposed rulemaking or take other action to guide industry efforts at arriving at appropriate national standards for access to operations support systems.

6. Other Network Elements

a. Background

529. In the NPRM, we requested comment on other network elements the Commission should require incumbent LECs to unbundle. We tentatively concluded that

[1278] *See* Sprint June 25 *Ex Parte*; AT&T comments at 38; BellSouth reply at 27.

[1279] *AT&T-Bell Atlantic Joint Ex Parte*.

"subscriber numbers" and "operator call completion services" should be unbundled.[1280] We also, under our discussion of section 251(b)(3), sought comment on nondiscriminatory access to telephone numbers, operator services, and directory assistance.[1281]

b. Comments

530. Many parties support the Commission's tentative conclusion that incumbent LECs should be required to unbundle "operator call completion services" as a separate network element.[1282] AT&T argues that such a network element would be more correctly described as the "operator systems" used to provide these services.[1283] Some state commissions have proposed or required unbundling of operator services because they are critical to new entrants' ability to enter the local exchange market.[1284] Several incumbent LECs, however, argue that they should not be required to unbundle operator services as a network element, because both alternative providers and incumbent LECs provide them on a nondiscriminatory basis.[1285] Some incumbent LECs also advance the argument that Congress did not intend for operator services to be treated as a network element, instead requiring

[1280] NPRM at para. 116.

[1281] NPRM at paras. 214-217.

[1282] ACSI comments at 44; ALTS comments at 32 (competitors must have nondiscriminatory access to busy line verification and call interrupt as these functionalities are currently only available from the incumbent LEC); AT&T comments at 26; Continental comments at 19; MCI comments at 18-20; Cable & Wireless comments at 20; Citizens Utilities comments at 15; Colorado Commission comments at 24; Comcast comments at 20; Competition Policy Institute comments at 16; DOJ comments at 21; Frontier comments at 17 n.32; GCI comments at 12; Telecommunications Resellers Ass'n comments at 36; TIA comments at 13 (special toll, public telephone and other calls requiring operator assistance); Wyoming Commission comments at 21; Jones Intercable reply at 30.

[1283] AT&T comments at 26 n.32; *see also* Competition Policy Institute comments at 16 (defined operator services as the live or mechanized systems which provide customers with operator services, such as call intercept, directory assistance and call completion); Jones Intercable reply at 30 n.51.

[1284] Wyoming comments at 22; *Illinois Wholesale Order*; AT&T reply 20-21 n.34. *See* Letter from Daniel Brenner, Vice President for Law & Regulatory Policy, NCTA, to Regina Keeney, Chief, Common Carrier Bureau, FCC, April 15, 1996 (NCTA April 15 *Ex Parte*).

[1285] Bell Atlantic comments at 30 (operator services is a competitive market with over 145 operator services providers in the United States); GTE comments at 44; USTA comments at 17 (incumbent LECs already provide operator services on a contract or tariff basis); U S West comments at 46 n.103.

BOCs to provide nondiscriminatory access to such services as one of the conditions for BOC entry into in-region interLATA services under section 271.[1286]

531. Commenters advance different proposals as to how to unbundle access to operator call completion services. Some competitors advocate defining the entire service as a network element so that a competitor could provide its own operator services by interconnecting at the incumbent LEC's switch.[1287] AT&T argues that such services are not necessary for competitors that have their own comparable systems.[1288] Some competitors argue that incumbent LECs must make subscriber name and number and billing and collection services available so that a competitor can provide call completion and directory assistance with its own operators.[1289] Other parties, mostly incumbent LECs, state that such a proposal is not technically feasible.[1290] MCI further states that it needs access to incumbent LEC subscriber number information for the provision of directory assistance and call completion services by its own operator systems.[1291] Other competitors want the incumbent LEC to provide them with unbranded operator call completion services,[1292] much as some of the larger incumbent LECs and IXCs do now for smaller carriers.[1293]

[1286] Ameritech reply at 12 n.15; Bell Atlantic comments at 30; Cincinnati Bell comments at 19 (arguing that unbundling of operator services would impose large costs on smaller incumbent LECs); GTE comments at 44 (section 271 requires nondiscriminatory access to call completion services, not unbundled access to the relevant databases); PacTel reply at 21; SBC comments at 83-84; USTA reply at 17-18.

[1287] MCI comments at 37; AT&T reply at 21 (incumbent LECs must unbundle operator systems so that a competitor providing its own does not have to pay for the incumbent LECs' services).

[1288] AT&T comments at 26.

[1289] ACSI comments at 44.

[1290] *See* SBC reply at 22-23.

[1291] MCI comments at 37.

[1292] Unbranded or rebranded operator services involve the provision of such services by the incumbent LEC for the requesting carrier either: (1) without any identification to the customer that it is the incumbent LEC actually providing such services; or (2) in a manner that the incumbent LEC identifies itself to the customer solely as the requesting carrier for the provision of these services.

[1293] ACSI comments at 47-48; AT&T comments at 26; GCI comments at 12.

532. Many commenters argue that directory assistance and the databases used to provide such services should be separately unbundled as a network element.[1294] Some commenters advocate requiring incumbent LECs to provide unbranded directory assistance as a network element.[1295] MCI notes that Pacific Bell operates a joint directory assistance database for itself and GTE, and argues that competing carriers should be able to participate in a similar type arrangement with incumbent LECs.[1296]

533. Some commenters argue that access to "subscriber numbers" should be unbundled and that access to the Number Assignment database should be unbundled.[1297] MCI advocates that the Commission require incumbent LECs to provide unbundled access to their subscriber number information sufficient for the provision of directory assistance and call completion service by competing carriers using their own operators.[1298] Other parties argue that such access should not be required.[1299]

c. Discussion

(1) Operator Services and Directory Assistance

534. We conclude that incumbent LECs are under the same duty to permit competing carriers nondiscriminatory access to operator services and directory assistance facilities as all LECs are under section 251(b)(3).[1300] We further conclude that, if a carrier requests an incumbent LEC to unbundle the facilities and functionalities providing operator services and directory assistance as separate network elements, the incumbent LEC must provide the

[1294] NCTA comments at 42; Teleport comments at 37; GST comments at 25; GCI comments at 12; MCI comments at 37 (MCI further recognizes directory assistance and directory listings).

[1295] Comcast comments at 20; Citizens Utilities comments at 15.

[1296] MCI comments at 33, 38 (California Commission ruling adopting this requirement is published at *Re GTE California Incorporated*, 31 CPUC 2d, 370 (1989)).

[1297] MCI comments at 19-20; ACSI comments at 43.

[1298] MCI comments at 37.

[1299] GTE comments at 43 (to the extent "subscriber numbers" means number administration, nondiscriminatory access is assured by industry guidelines and the Commission's intent to establish a number administration entity); Cincinnati Bell comments at 19 (subscriber numbers and information sufficient for billing and collection should be addressed in the bona fide request process).

[1300] *SeeNPRM* at paras. 203-219.

competing provider with nondiscriminatory access to such facilities and functionalities at any technically feasible point. We believe that these facilities and functionalities are important to facilitate competition in the local exchange market. Further, the 1996 Act imposes upon BOCs, as a condition of entry into in-region interLATA services the duty to provide nondiscriminatory access to directory assistance services and operator call completion services.[1301] We therefore conclude that unbundling facilities and functionalities providing operator services and directory assistance is consistent with the intent of Congress.

535. As discussed in our section on nondiscriminatory access under section 251(b)(3),[1302] the provision of nondiscriminatory access to operator services and directory assistance must conform to the requirements of section 222, which restricts carrier's use of CPNI.[1303] In particular, access to directory assistance and underlying directory information does not require incumbent LECs to provide access to unlisted or unpublished telephone numbers, or other information that the incumbent LEC's customer has requested the LEC not to make available. In conforming to section 222, we anticipate that incumbent LECs will provide such access in a manner that will protect against the inadvertent release of unlisted customer names and numbers.

536. We note that several competitors advocate unbundling the facilities and functionalities providing operator services and directory assistance from particular resold services or the unbundled local switching element, so that a competing provider can provide these services to its customers supported by its own systems rather than those of the incumbent LEC.[1304] Some incumbent LECs argue that such unbundling, however, is not technically feasible because of their inability to route individual end user calls to multiple systems.[1305] We find that unbundling both the facilities and functionalities providing operator services and directory assistance as separate network elements will be beneficial to competition and will aid the ability of competing providers to differentiate their service from the incumbent LECs. We also note that the Illinois Commission has recently ordered such

[1301] 47 U.S.C. § 271(c)(2)(B)(vii)(II)-(III).

[1302] *SeeNPRM* at paras. 203-219.

[1303] *See Implementation of the Telecommunications Act of 1996: Telecommunications Carriers' Use of Customer Proprietary Network Information and other Customer Information*, CC Docket No. 96-115, Notice of Proposed Rulemaking, FCC 96-221 (rel. May 17, 1996).

[1304] *See, e.g.*, AT&T comments at 26; Cable & Wireless comments at 20; Colorado Commission comments at 24; DOJ comments at 21; Frontier comments at 17 n.32; MCI comments at 18-20; Jones Intercable reply at 30.

[1305] SBC reply at 22-23.

access.[1306] We therefore find that incumbent LECs must unbundle the facilities and functionalities providing operator services and directory assistance from resold services and other unbundled network elements to the extent technically feasible. As discussed above in our section on unbundled switching, we require incumbent LECs, to the extent technically feasible, to provide customized routing, which would include such routing to a competitor's operator services or directory assistance platform.[1307]

537. We also note that some competitors seek access to operator services and directory assistance in order to serve their own customers.[1308] Some of these parties argue that nondiscriminatory access to such network elements requires incumbent LECs to provide rebranded operator call completion services and directory assistance to the competing carrier's customers.[1309] Incumbent LECs argue that the provision of these services on an unbranded or rebranded basis is not technically feasible because of their inability at the operator services or directory assistance platforms to identify the carrier serving the end user.[1310] As we concluded in our discussion on section 251(b)(3), we find that incumbent LECs must permit nondiscriminatory access to both operator services and directory assistance in the same manner required of all LECs.[1311] We make no finding on the technical feasibility of providing branded or unbranded service to competitors based on the record before us. We note, however, that the Illinois Commission has ordered incumbent LECs to provide rebranded operator call completion services and directory assistance to requesting competitive carriers.[1312]

538. As discussed above, incumbent LECs must provide access to databases as unbundled network elements.[1313] We find that the databases used in the provision of both operator call completion services and directory assistance must be unbundled by incumbent

[1306] *See Illinois Wholesale Order.*

[1307] *See infra*, Section V.I.2.

[1308] AT&T comments at 26.

[1309] ACSI comments at 47-48; AT&T comments at 26; Comcast comments at 20; GCI comments at 12.

[1310] SBC reply at 22-23.

[1311] *See NPRM* at paras. 203-219.

[1312] *See Illinois Wholesale Order.*

[1313] *See supra*, Section V.J.

LECs upon a request for access by a competing provider. In particular, the directory assistance database must be unbundled for access by requesting carriers.[1314] Such access must include both entry of the requesting carrier's customer information into the database, and the ability to read such a database, so as to enable requesting carriers to provide operator services and directory assistance concerning incumbent LEC customer information. We clarify, however, that the entry of a competitor's customer information into an incumbent LEC's directory assistance database can be mediated by the incumbent LEC to prevent unauthorized use of the database. We find that the arrangement ordered by the California Commission concerning the shared use of such a database by Pacific Bell and GTE is one possible method of providing such access.[1315]

539. Section 251(d)(2)(A) requires the Commission to consider whether "access to such network elements as are proprietary in nature is necessary."[1316] Parties generally did not identify proprietary concerns with unbundling access to operator call completion services or directory assistance. Incumbent LECs generally did not claim a proprietary interest in their directory assistance databases. Many parties contend that proprietary interests leading to restrictions on use or sharing of such database information would injure their ability to compete effectively for local service.[1317] For the reasons described below, we find that access to the systems supporting both operator call completion services and directory assistance is necessary for new entrants to provide competing local exchange service.

540. Section 251(d)(2)(B) requires the Commission to consider whether "the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[1318] Parties identified access to operator call completion services and directory assistance as critical to the provision of local service.[1319] Therefore we conclude that competitors' ability to provide service would be significantly impaired if they did not have access to incumbent LECs' operator call completion services and directory assistance.

[4] We find the joint directory assistance database used by Pacific Bell and GTE to be one method of such access. MCI comments at 38.

See Re GTE California Incorporated, 31 CPUC 2d 370 (1989).

47 U.S.C. § 251(d)(2)(A).

MCI comments at 37-38.

47 U.S.C. § 251(d)(2)(B).

MCI comments at 37-38.

(2) Subscriber Numbers

541. Some commenters argue that the Commission should require incumbent LECs to unbundle access to subscriber numbers. We conclude that no Commission action under section 251(b)(3) is required at this time to ensure nondiscriminatory access to subscriber numbers. Issues regarding access to subscriber numbers will be addressed by our implementation of section 251(e).[1320]

[1320] *See Number Portability Order.*

VI. METHODS OF OBTAINING INTERCONNECTION AND ACCESS TO UNBUNDLED ELEMENTS

542. In this section, we address the means of achieving interconnection and access to unbundled network elements that incumbent LECs are required to make available to requesting carriers.

A. Overview

1. Background

543. Section 251(c)(2) requires incumbent LECs to provide interconnection with the LEC's network "for the facilities and equipment of any requesting telecommunications carrier."[1321] Section 251(c)(6) imposes upon incumbent LECs "the duty to provide . . . for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the premises of the [LEC], except that the carrier may provide for virtual collocation if the [LEC] demonstrates to the State commission that physical collocation is not practical for technical reasons or because of space limitations."[1322] In the NPRM, we noted that section 251(c)(6) does not expressly limit the Commission's authority under section 251(c)(2) to establish rules requiring incumbent LECs to make available a variety of methods of interconnection, except in situations where the incumbent can demonstrate to the state commission that physical collocation is not practical for technical reasons or space limitations. We tentatively concluded that the Commission has the authority to require any reasonable method of interconnection, including physical collocation, virtual collocation, and meet point interconnection arrangements.[1323]

[1321] 47 U.S.C. § 251(c)(2).

[1322] 47 U.S.C. § 251(c)(6).

[1323] NPRM at para. 64. Under the Commission's *Expanded Interconnection* rules, LECs are not required to offer a collocating carrier a choice between physical and virtual collocation. *Special Access Order*, 7 FCC Rcd at 7407; *Switched Transport Order*, 8 FCC Rcd at 7404; *see also Physical Collocation Designation Order*, 8 FCC Rcd 4589 (under our *Expanded Interconnection* rules, LECs must provide virtual collocation where: virtual collocation is available on an intrastate basis; a LEC has negotiated an interstate virtual collocation arrangement; LECs are exempted from providing physical collocation because of space constraints; or a state commission has granted a waiver). Also, *see* Section VI.B.1.b, regarding the definitions of physical and virtual collocation.

2. Comments

544. Many parties agree with our tentative conclusion that we have the authority to require any reasonable method of interconnection.[1324] The Illinois Commission states that the purpose of 251(c)(6) is to eliminate any question about the Commission's authority to require physical collocation, and not to limit the type of interconnection incumbent LECs are required to provide under 251(c)(2).[1325]

545. CAPs and IXCs argue that incumbent LECs should be required to offer competitive entrants the choice between physical and virtual collocation, regardless of whether it is practical to offer physical collocation at a particular LEC premises.[1326] Consumer Federation of America and the Consumers Union argue that the Commission can and should order physical and virtual collocation.[1327] MCI contends that interconnectors have the right to choose virtual or physical collocation, or both, and should have the right to switch from one arrangement to another while paying only the actual costs of such a change.[1328] Sprint argues that the authority to require physical collocation necessarily includes the authority to require less invasive forms of collocation, such as virtual.[1329] Hyperion contends that small carriers lack the financial resources to make the economic investment necessary for physical collocation at every end office. Hyperion suggests that permitting new entrants to request virtual or physical collocation, depending upon their requirements would encourage

[1324] *See, e.g.*, MFS comments at 17-18 (if Congress meant that 251(c)(6) collocation was the exclusive means of obtaining interconnection or access to unbundled elements, then subsections (c)(2) and (c)(3) would not have been required); Teleport comments at 26; Citizens Utilities comments at 11; Illinois Commission comments at 33; Pennsylvania Commission comments at 22; Sprint reply at 21.

[1325] Illinois Commission comments at 33; MFS comments at 18 (no inference can be drawn that Congress intended any limitation on the Commission's authority to require forms of interconnection other than physical collocation, especially in light of section 251(i)).

[1326] *See, e.g.*, AT&T comments at 41; Hyperion comments at 14; MFS comments at 23.

[1327] CFA/CU comments at 14.

[1328] MCI comments at 56.

[1329] Sprint Comments at 19.

competition.[1330] ACTA asserts that the cost of converting existing virtual collocation arrangements to physical should be borne by the incumbent LEC.[1331]

546. Several parties urge the Commission to require interconnection at "meet points."[1332] Teleport states that incumbent LECs currently provide meet point interconnection arrangements between one another's facilities and are thus obligated to provide such arrangements to others.[1333] Teleport also claims that requiring meet point arrangements would be pro-competitive because it would allow competitors the flexibility to construct more efficient networks by eliminating the need to match the incumbent LEC's network.[1334]

547. Incumbent LECs respond that the statute does not give the Commission authority to require virtual collocation in addition to physical collocation.[1335] Ameritech argues that Congress specifically addressed collocation in section 251(c)(6), and that it would be inappropriate to mandate virtual collocation pursuant to the general duty under section 251(c)(2) to provide interconnection. It contends that, under principles of statutory construction, the specific language of section 251(c)(6), which provides for virtual collocation only where physical collocation is not practical, should govern the general language of section 251(c)(2).[1336]

548. GTE claims that section 251(c)(2) does not provide for any Commission role in specifying acceptable forms of interconnection.[1337] Bell Atlantic and BellSouth claim that meet point interconnection arrangements are very complex and should not be mandated by the

[1330] Hyperion comments at 15.

[1331] ACTA comments at 16.

[1332] A meet point is a point, designated by two carriers, at which one carrier's responsibility for service begins and the other carrier's responsibility ends.

[1333] Teleport reply at 25; Sprint reply 21-22 (argues for a "mid-span" meet arrangement whereby two carriers' fiber optic cables would be spliced together at a point between two repeaters).

[1334] Teleport reply at 25.

[1335] *See, e.g.*, Bell Atlantic comments at 34; PacTel comments at 36.

[1336] Ameritech comments at 24.

[1337] GTE comments at 22.

Commission or the states, but rather left to the negotiation process.[1338] PacTel argues that incumbent LECs should not be required to develop new network capabilities or expand current network facilities to interconnect with competitors.[1339]

3. Discussion

549. We conclude that, under sections 251(c)(2) and 251(c)(3), any requesting carrier may choose any method of technically feasible interconnection or access to unbundled elements at a particular point. Section 251(c)(2) imposes an interconnection duty at any technically feasible point; it does not limit that duty to a specific method of interconnection or access to unbundled elements.

550. Physical and virtual collocation are the only methods of interconnection or access specifically addressed in section 251. Under section 251(c)(6), incumbent LECs are under a duty to provide physical collocation of equipment necessary for interconnection unless the LEC can demonstrate that physical collocation is not practical for technical reasons or because of space limitations. In that event, the incumbent LEC is still obligated to provide virtual collocation of interconnection equipment. Under section 251, the only limitation on an incumbent LEC's duty to provide interconnection or access to unbundled elements at any technically feasible point is addressed in section 251(c)(6) regarding physical collocation. Unless a LEC can establish that the specific technical or space limitations in subsection (c)(6) are met with respect to physical collocation, we conclude that incumbent LECs must provide for any technically feasible method of interconnection or access requested by a competing carrier, including physical collocation.[1340] If, for example, we interpreted section 251(c)(6) to limit the means of interconnection available to requesting carriers to physical and virtual collocation, the requirement in section 251(c)(2) that interconnection be made available "at any technically feasible point" would be narrowed dramatically to mean that interconnection was required only at points where it was technically feasible to collocate equipment. We are not pursuaded that Congress intended to limit interconnection points to locations only where collocation is possible.

551. Section 251(c)(6) provides the Commission with explicit authority to mandate physical collocation as a method of providing interconnection or access to unbundled elements. Such authority was previously found lacking by the U.S. Court of Appeals for the

[1338] Bell Atlantic comments at 22; BellSouth comments at 23.

[1339] PacTel comments at 19.

[1340] Because we require incumbent LECs to offer virtual collocation in addition to physical collocation, we reject the suggestion of ACTA that the cost of converting from virtual to physical collocation be borne by the incumbent LEC. *See* ACTA comments at 16.

D.C. Circuit in *Bell Atlantic v. FCC*,[1341] which was decided prior to enactment of the 1996 Act. While section 251(c)(6) limits an incumbent LEC's duty to provide physical collocation in certain circumstances, we find that it does not limit our authority to require, under sections 251(c)(2) and (c)(3), the provision of virtual collocation. We note that under our *Expanded Interconnection* rules, that were amended subsequent to the Bell Atlantic decision, competitive entrants using physical collocation were required by many incumbent LECs to convert to virtual collocation. If the Commission concluded that subsection (c)(6) places a limitation on our authority to require virtual collocation, competitive providers would be required to undertake costly and burdensome actions to convert back to physical collocation even if they were satisfied with existing virtual collocation arrangements. We conclude that Congress did not intend to impose such a burden on requesting carriers that wish to continue to use virtual collocation for purposes of section 251(c). Further, the record indicates that this requirement would be costly and would delay competition.[1342] In short, we conclude that, in enacting section 251(c)(6), Congress intended to expand the interconnection choices available to requesting carriers, not to restrict them.

552. We also conclude that requiring incumbent LECs to provide virtual collocation and other technically feasible methods of interconnection or access to unbundled elements is consistent with Congress's desire to facilitate entry into the local telephone market by competitive carriers. In certain circumstances, competitive carriers may find, for example, that virtual collocation is less costly or more efficient than physical collocation. We believe that this may be particularly true for small carriers which lack the the financial resources to physically collocate equipment in a large number of incumbent LEC premises.[1343] Moreover, since requesting carriers will bear the costs of other methods of interconnection or access, this approach will not impose an undue burden on the incumbent LECs.

553. Consistent with this view, other methods of technically feasible interconnection or access to incumbent LEC networks, such as meet point arrangements, in addition to virtual

[1341] *Bell Atlantic Telephone Companies v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994) (Bell Atlantic v. FCC).

[1342] *See* Teleport comments at 32; ALTS comments at 23; Time Warner comments at 42-44 (objecting to non-recurring charges for the reconnection of existing interconnected virtual collocation services to a replacement physical collocation arrangement).

[1343] *See* Hyperion comments at 15.

and physical collocation, must be available to new entrants upon request.[1344] Meet point arrangements (or mid-span meets), for example, are commonly used between neighboring LECs for the mutual exchange of traffic, and thus, in general, we believe such arrangements are technically feasible.[1345] Further, although the creation of meet point arrangements may require some build out of facilities by the incumbent LEC, we believe that such arrangements are within the scope of the obligations imposed by sections 251(c)(2) and 251(c)(3). In a meet point arrangement, the "point" of interconnection for purposes of sections 251(c)(2) and 251(c)(3) remains on "the local exchange carrier's network"[1346] (*e.g.*, main distribution frame, trunk-side of the switch), and the limited build-out of facilities from that point may then constitute an accommodation of interconnection.[1347] In a meet point arrangement each party pays its portion of the costs to build out the facilities to the meet point. We believe that, although the Commission has authority to require incumbent LECs to provide meet point arrangements upon request, such an arrangement only makes sense for interconnection pursuant to section 251(c)(2) but not for unbundled access under section 251(c)(3). New entrants will request interconnection pursuant to section 251(c)(2) for the purpose of exchanging traffic with incumbent LECs. In this situation, the incumbent and the new entrant are co-carriers and each gains value from the interconnection arrangement. Under these circumstances, it is reasonable to require each party to bear a reasonable portion of the economic costs of the arrangement. In an access arrangement pursuant to section 251(c)(3), however, the interconnection point will be a part of the new entrant's network and will be used to carry traffic from one element in the new entrant's network to another. We conclude that in a section 251(c)(3) access situation, the new entrant should pay all of the economic costs of a meet point arrangement. Regarding the distance from an incumbent LEC's premises that an incumbent should be required to build out facilities for meet point arrangements, we believe that the parties and state commissions are in a better position than the Commission to determine the appropriate distance that would constitute the required reasonable accommodation of interconnection.

[1344] *See* Teleport comments at 26-30; *see also* Washington Utilities and Transportation Commission, *Fourth Supplemental Order Rejecting Tariff Filings and Ordering Refiling*; Granting Complaints, in Part, (Washington Commission Oct. 31, 1995), Docket No. UT-941464, at 45; *Application of Electric Lightwave, Inc., MFS Intelnet of Oregon, Inc., and MCI Metro Access Transmission Services, Inc.*, Public Utility Commission of Oregon Order, Order No. 96-021, (Oregon Commission Jan. 12, 1996), at 68-69; *Rules for Telecommunications Interconnection and Unbundling*, Arizona Corporation Commission Order, Decision No. 59483, (Arizona Commission Jan. 11, 1996), Proposed Rule R14-2-1303 (Attachment E hereto).

[1345] The Michigan Commission recently required Ameritech to provide meet point interconnection. Michigan Public Service Commission, Case No. U-10860 (Michigan June 5, 1996) at 18 n.4.

[1346] 47 U.S.C. § 251(c)(2).

[1347] *See, supra* Section IV.E., above, discussing accommodation of interconnection.

554. Finally, in accordance with our interpretation of the term "technically feasible," we conclude that, if a particular method of interconnection is currently employed between two networks, or has been used successfully in the past, a rebuttable presumption is created that such a method is technically feasible for substantially similar network architectures. Moreover, because the obligation of incumbent LECs to provide interconnection or access to unbundled elements by any technically feasible means arises from sections 251(c)(2) and 251(c)(3), we conclude that incumbent LECs bear the burden of demonstrating the technical infeasibility of a particular method of interconnection or access at any individual point.

B. Collocation

1. Collocation Standards

a. Adoption of National Standards

(1). Background

555. In the NPRM we tentatively concluded that we should adopt national rules for virtual and physical collocation. This tentative conclusion was based on the belief that national standards would help to speed the development of competition.[1348] We also sought comment on specific national standards that we might adopt, and on whether any specific state approaches would serve as an appropriate model.[1349]

(2). Comments

556. Incumbent LECs and state commissions argue that collocation is a state matter and that terms and conditions for collocation should be negotiated between the parties[1350] or determined by the states.[1351] Some parties recommend that, to the extent national guidelines are necessary, the Commission should readopt the standards established in the *Expanded*

[1348] NPRM at para. 24.

[1349] NPRM at para. 70.

[1350] BellSouth comments at 23; SBC comments at 64; USTA comments at 19; PacTel comments at 34.

[1351] *See, e.g.*, New York Commission comments at 13-14; *see also* Ohio Commission comments at 29; Florida Commission comments at 22; Oregon Commission comments at 23.

Interconnection proceeding.[1352] Teleport and the New York Commission suggest that, if we adopt rules, we should use the New York Commission's "comparably efficient interconnection" standard as a model.[1353] The Alabama and Missouri Commissions support the approach to interconnection that each adopted in their respective states.[1354] Pacific Telesis supports California's "preferred outcomes approach."[1355]

557. Competitive providers generally favor national standards for collocation.[1356] MFS argues that Congress did not intend for the states to have a policy role in collocation matters, and that unambiguous national guidelines are needed to prevent incumbent LECs from engaging in discriminatory practices and to avoid duplicative litigation in multiple forums.[1357]

(3). Discussion

558. We conclude that we should adopt explicit national rules to implement the collocation requirements of the 1996 Act. We find that specific rules defining minimum requirements for nondiscriminatory collocation arrangements will remove barriers to entry by potential competitors and speed the development of competition. Our experience in the *Expanded Interconnection* proceeding indicates that incumbent LECs have an economic

[1352] USTA comments at 19; Bell Atlantic comments at 32-33; Sprint reply at 22; California Commission comments at 24, Texas Commission comments at 13-14; District of Columbia Commission comments at 20.

[1353] Teleport comments at 30 (this standard is consistent with, if not demanded by, the requirements for nondiscriminatory interconnection in section 251(c)(2)(C)); New York Commission comments at 34 (the Commission should not set specific rules, but should adopt guidelines that incumbent LECs offer comparably efficient interconnection).

[1354] Alabama Commission comments at 17 (under Alabama's interconnection model, parties negotiate collocation arrangements and may petition the Alabama commission to require collocation under specific terms and conditions should negotiations fail); Missouri Commission comments at 12 (The Missouri Commission requires the incumbent LEC to provide the type of interconnection that the interconnecting carrier requests, either physical or virtual. The Commission also requires that large incumbent LECs tariff their interconnection arrangements, and that collocators pay a deposit).

[1355] PacTel comments at 36.

[1356] Intermedia comments at 6; Teleport comments at 30; ALTS comments at 21; Hyperion comments at 14; ACSI comments at 14; NCTA comments at 34; Telecommunications Resellers Ass'n comments at 46; Time Warner comments at 32; MFS comments at 20-21; AT&T comments at 39.

[1357] MFS comments at 20-21.

incentive to interpret regulatory ambiguities to delay entry by new competitors.[1358] We and the states should therefore adopt, to the extent possible, specific and detailed collocation rules. We find, however, that states should have flexibility to apply additional collocation requirements that are otherwise consistent with the 1996 Act and our implementing regulations.

b. Adoption of *Expanded Interconnection* Terms and Conditions for Physical and Virtual Collocation under Section 251

(1). Background

559. In our *Expanded Interconnection* proceeding, we required LECs to offer expanded interconnection to all interested parties, which allowed competitors and end users to terminate their own special access and switched transport access transmission facilities at LEC central offices.[1359] We required Tier 1 LECs[1360] to offer physical collocation, with the interconnecting party paying the LEC for central office floor space.[1361] We required that LECs provide space to interested parties on a first-come first-served basis, and that they

[1358] Our review of the LECs' initial physical and virtual collocation tariffs raised significant concerns regarding the implementation of our *Expanded Interconnection* requirements and resulted in the designation of numerous issues for investigation. The Commission has not yet reached decisions on most of these issues, though it has found that certain rates for virtual collocation were unlawful. *See Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Virtual Collocation for Special Access and Switched Transport*, 10 FCC Rcd 6375 (Com. Car. Bur. 1995)(*Phase I Report and Order*); *see also Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection for Special Access*, 8 FCC Rcd 6909 (Com. Car. Bur. 1993) (*Physical Collocation Designation Order*); *Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through* Virtual Collocation for Special Access and Switched Transport, 10 FCC Rcd 11116 (Com. Car. Bur. 1995)(*Virtual Collocation Designation Order*).

[1359] *Expanded Interconnection with Local Telephone Company Facilities, First Report and Order*, 7 FCC Rcd 7369 (1992)(*Special Access Order*), *vacated in part and remanded, Bell Atlantic*, 24 F.3d 1441 (1994); *First Reconsideration*, 8 FCC Rcd 127 (1993); *vacated in part and remanded, Bell Atlantic*, 24 F.3d 1441; *Second Reconsideration*, 8 FCC Rcd 7341 (1993); *Second Report and Order*, 8 FCC Rcd 7374 (1993)(*Switched Transport Order*), *vacated in part and remanded, Bell Atlantic Telephone Cos., v. FCC*, 24 F.3d 1441; *Remand Order*, 9 FCC Rcd 5154 (1994)(*Virtual Collocation Order*), *remanded for consideration of 1996 Act, Pacific Bell, et al. v. FCC*, 81 F.3d 1147 (1996) (collectively referred to as *Expanded Interconnection)*. Interstate access is a service traditionally provided by local telephone companies and enables IXCs and other customers to originate and terminate interstate telephone traffic. Special access is a form of interstate access that uses dedicated transmission lines between two points, without switching the traffic on those lines. Switched transport is another form of interstate access comprising the transmission of traffic between interexchange carriers' (or other customers') points of presence and local telephone companies' end offices, where the traffic is switched and routed to end users.

[1360] Tier 1 LECs are local exchange carriers having $100 million or more in "total company annual regulated revenues." *Commission Requirements for Cost Support Material to be Filed with 1990 Annual Access Tariffs*, 5 FCC Rcd 1364, 1364 (Com. Car. Bur. 1990)(*1990 Cost Support Order*).

[1361] The interconnecting party uses the space to locate equipment necessary to terminate its transmission links for interconnection with the LEC's network. The interconnector has physical access to this space in the LEC central office to install, maintain, and repair its transmission equipment. *Special Access Order*, 7 FCC Rcd at 7391.

provide virtual collocation when space for physical collocation is exhausted.[1362] Under virtual collocation, interconnectors are allowed to designate central office transmission equipment dedicated to their use, as well as to monitor and control their circuits terminating in the LEC central office. Interconnectors, however, do not pay for the incumbent's floor space under virtual collocation arrangements and have no right to enter the LEC central office. Under our virtual collocation requirements, LECs must install, maintain, and repair interconnector-designated equipment under the same intervals and with the same or better failure rates for the performance of similar functions for comparable LEC equipment.[1363]

560. In the *Expanded Interconnection* proceeding, we required the LECs to file tariffs to implement our virtual and physical collocation requirements. Our initial review of the LECs' tariffs raised significant concerns regarding the LECs' provision of physical and virtual collocation.[1364] Consequently, the Bureau partially suspended the rates proposed by many of the LECs and allowed these rates to take effect subject to investigation and an accounting order.

561. In 1994, the U.S. Court of Appeals for the District of Columbia Circuit found that the FCC lacked the authority under section 201 of the 1934 Communications Act to require physical collocation and remanded all other issues to the Commission.[1365] On remand, we adopted rules for both special access and switched transport that required LECs to provide either virtual or physical collocation, at the LECs' option.[1366] Those rules currently are in place, although the court of appeals remanded the *Remand Order* to us to consider the impact of the 1996 Act on those rules.[1367] In the 1996 Act, Congress specifically directed incumbent LECs to provide physical collocation for interconnection and access to unbundled network

[1362] 7 FCC Rcd at 7391.

[1363] *Special Access Order*, 7 FCC Rcd at 7394; *Switched Transport Order*, 8 FCC Rcd at 7393.

[1364] *See Special Access Physical Collocation Designation Order*, 8 FCC Rcd 6909; *Virtual Collocation Designation Order*, 10 FCC Rcd 11116; *see also supra*, note 1358.

[1365] *Bell Atlantic v. FCC*, 24 F.3d 1441.

[1366] *Remand Order*, 9 FCC Rcd 5154.

[1367] *Pacific Bell et al. v. FCC*, 81 F.3d 1147 (D.C. Cir. 1996). As discussed in Section VI.B.2.a, below, we find that the 1996 Act does not supplant or otherwise alter our *Expanded Interconnection* rules for interstate interconnection services provided pursuant to section 201 of the Communications Act.

elements, absent technical or space constraints, pursuant to section 251(c)(6) of the Communications Act.[1368]

562. We sought comment in the NPRM on whether, for purposes of implementing physical and virtual collocation under section 251, we should readopt the standards set out in our *Expanded Interconnection* proceeding and, if so, how to adapt those standards to reflect the new statutory requirements and other policy considerations of the 1996 Act.[1369]

(2). Comments

563. To the extent parties addressed the substantive content of national rules, most favor readoption of the *Expanded Interconnection* rules. Assuming that national standards are to be adopted, several state commissions and a number of incumbent LECs generally favor readoption of our *Expanded Interconnection* requirements because they were developed based on an extensive record.[1370] BellSouth, in contrast, argues that the Commission's *Expanded Interconnection* rules are no longer necessary under the 1996 Act, because parties should be free to negotiate agreements between themselves without being governed by FCC rules.[1371] SBC and Pacific Telesis argue that physical collocation should be negotiated in order to allow parties to address unique requirements.[1372] Cincinnati Bell argues that the FCC should not establish regulations regarding services that are ancillary to collocation such as rent, insurance, and equipment maintenance, because they are not activities within the purview of Title II of the Communications Act.[1373]

[1368] 47 U.S.C. § 251(c)(6).

[1369] NPRM at para. 71.

[1370] Bell Atlantic comments at 33; Cincinnati Bell comments at 15; PacTel comments at 35; NYNEX comments at 66; Roseville Tel. comments at 2-3; SNET comments at 15; GTE comments at 24 (*Expanded Interconnection* rules should be readopted if used to identify acceptable outcomes and not to dictate behavior); *see also* Alabama Commission comments at 17; Texas Commission comments at 14; Illinois Commission comments at 35.

[1371] BellSouth comments at 24 (the Act sets up a new framework under which the parties must be free to negotiate arrangements "unencumbered by excessive rules and regulations").

[1372] PacTel reply at 12; SBC comments at 64 (collocation should be negotiated and should not be subject to uniform requirements because of the differing conditions at each location).

[1373] Cincinnati Bell comments at 15.

564. CAPs and IXCs also generally favor readoption of our *Expanded Interconnection* requirements.[1374] Several commenters advocate specific amendments that they believe are required by the 1996 Act or by intervening circumstances.[1375] MFS, however, argues that the purposes of the 1996 Act are much broader than those of the *Expanded Interconnection* proceedings and that the collocation standards under section 251 should reflect this difference.[1376] MCI contends that existing collocation rules, terms, and conditions should be significantly modified.[1377] Teleport asserts that the Commission should require all incumbent LECs to refile with the FCC their most recent physical collocation tariffs, subject to the previously applicable accounting orders.[1378]

(3). Discussion

565. We conclude that we should adopt the existing *Expanded Interconnection* requirements, with some modifications, as the rules applicable for collocation under section 251.[1379] Those rules were established on the basis of an extensive record in the *Expanded Interconnection* proceeding, and are largely consistent with the requirements of section 251(c)(6). Adoption of those requirements for purposes of collocation under section 251, moreover, has substantial support in the record of this proceeding. Thus, the standards established for physical and virtual collocation in our *Expanded Interconnection* proceeding will generally apply to collocation under section 251. The most significant requirements of *Expanded Interconnection* are specifically set out in rules we adopt here. We address pricing and rate structure issues separately, in section VII below.

566. We find, however, that certain modifications to our *Expanded Interconnection* requirements are necessary to account for specific provisions of section 251(c)(6) and service

[1374] *See, e.g.*, Sprint comments at 21; Time Warner comments at 38; Intermedia comments at 6.

[1375] ALTS comments at 24; Telecommunications Resellers Ass'n comments at 47; Intermedia comments at 9 (incumbent LECs must tariff cross-connect elements for services not currently offered, such as packet switching, frame relay, ATM, and SONET services); ACSI comments at 16 (revised *Expanded Interconnection* rules should reflect resolution of issues raised in designation orders).

[1376] MFS comments at 22; *see also* MCI comments at 54.

[1377] MCI comments at 58.

[1378] Teleport comments at 31; Intermedia comments at 7 (arguing that LECs must establish terms and conditions for physical collocation within 30 days).

[1379] *See Remand Order*, 9 FCC Rcd at 5168-69, 5174-83.

arrangements that differ from those contemplated in our *Expanded Interconnection* orders.[1380] For example, the *Expanded Interconnection* requirements apply to Tier 1 LECs that are not NECA pool members, and section 251 applies to "incumbent LECs," though there is an exemption for certain rural carriers.[1381] *Expanded Interconnection* also allows end-users to interconnect their equipment, while section 251 requires that interconnection and access to unbundled network elements be provided to "any requesting telecommunications carrier."[1382] Accordingly, we set forth below several modifications to the terms and conditions for collocation as they are described in our *Expanded Interconnection* orders for application in implementing section 251. We believe that, in light of the expedited statutory time frame for this rulemaking and limited record addressing the specific terms and conditions for collocation under section 251 in this proceeding, it would be impractical and imprudent to develop a large number of new substantive collocation requirements in this order. We may consider the need for additional or different requirements in a subsequent proceeding, if we determine that such action is warranted.

567. The most significant difference between the *Expanded Interconnection* rules and the collocation rules we adopt to implement the 1996 Act concerns the collocation tariffing requirement. As discussed below, the 1996 Act does not require that collocation be federally tariffed.[1383] We thus do not adopt, under section 251, the *Expanded Interconnection* tariffing requirements originally adopted under section 201 for physical and virtual collocation. The existing tariffing requirements of *Expanded Interconnection* for interstate special access and switched transport will continue to apply for use by customers that wish to subscribe to those interstate services.[1384]

568. We reject SBC's contention that we may not adopt any terms and conditions in this proceeding that differ from those in the *Expanded Interconnection* proceeding. SBC argues that Congress intended, in section 251(c)(6), to use the term "physical collocation" as a term of art, and thereby to adopt wholesale the terms and conditions for physical collocation that the Commission adopted in the *Expanded Interconnection* proceeding. A variety of terms and conditions for physical collocation are possible and section 251(c)(6) makes no reference to the Commission's decisions on these issues in the *Expanded Interconnection* proceeding. If

[1380] *See supra*, note 1358, 1359.

See infra, Section XII.

See 47 U.S.C. § 251(c)(2), (3).

See infra, Section VI.B.2.a.

See infra, Section VI.B.2.a.

Congress had intended to readopt those rules wholesale without permitting the Commission any flexibility in the matter, we believe that Congress would have been more explicit rather than merely using the phrase "physical collocation." Thus, we believe that we can and should modify our preexisting standards, as set forth below, for purposes of implementing the provisions of section 251(c)(6). In the following sections (c. - i.) we address comments filed by interested parties concerning application of our existing *Expanded Interconnection* requirements for purposes of collocation under section 251.[1385]

569. Finally, our experience reviewing the tariffs that incumbent LECs filed to implement our requirements for physical and virtual collocation suggests that rates, terms, and conditions under which incumbent LECs propose to provide these arrangements pursuant to section 251(c)(6) bear close scrutiny.[1386] We strongly urge state commissions to be vigilant in their review of such arrangements.[1387] We will review this issue and revise our requirements as necessary.

c. The Meaning of the Term "Premises"

(1). Background

570. In the *Expanded Interconnection* proceeding, we required collocation at end offices, serving wire centers, and tandem switches, as well as at remote distribution nodes and any other points that the LEC treats as a "rating point."[1388] Section 251(c)(6) requires physical collocation "at the premises of the local exchange carrier."[1389] In the NPRM, we tentatively concluded that the term "premises" includes, in addition to LEC central offices and tandem offices, all buildings or similar structures owned or leased by the incumbent LEC that house LEC network facilities. We sought comment on whether structures that house LEC

[1385] In a number of instances, we decline to adopt proposals for modifications to our *Expanded Interconnection* requirements.

[1386] *See Special Access Physical Collocation Designation Order*, 8 FCC Rcd 6909; *Virtual Collocation Designation Order*, 10 FCC Rcd 11116.

[1387] Some areas our investigations have found problematic in the past include channel assignment, letters of agency, charges for repeaters, and placement of point-of-termination bays.

[1388] *See Remand Order*, 9 FCC Rcd at 5168; *Special Access Order*, 7 FCC Rcd at 7418; *Switched Transport Order*, 8 FCC Rcd at 7409. A rating point is a point used in calculating the length of interoffice special access links.

[1389] 47 U.S.C. § 251(c)(6).

network facilities on public rights-of-way, such as vaults containing loop concentrators or similar structures, should be deemed to be LEC "premises."[1390]

(2). Comments

571. Incumbent LECs generally argue that collocation is infeasible at locations other than central offices, tandem switching locations, and remote nodes, and that only such locations should be included in the interpretation of the word "premises."[1391] Pacific Telesis argues that points for collocation cannot be determined until the Commission determines the points of interconnection and access to unbundled network elements.[1392] Ameritech contends that we should define the term "premises" as only those portions of central office buildings in which the LEC has the exclusive right of occupancy and in which the technically feasible point of interconnection or access to unbundled elements is located.[1393] The Rural Tel. Coalition asks that interconnection and collocation points be established in a flexible manner to recognize size and volume differences among carriers.[1394]

572. CAPs and IXCs generally favor an expansive definition of the term "premises" that includes "structures housing LEC network facilities on public rights-of-way including vaults containing loop concentrators or similar structures."[1395] These commenters argue that physical collocation should be offered at any incumbent LEC location where physical collocation is technically feasible, including central offices, cable vaults, manholes, cross-connect points, loop carrier, and building closets.[1396] ALTS and MFS contend that assertions of technical infeasibility should be addressed in fact-specific situations and should not narrow

[1390] NPRM at para. 72.

[1391] *See, e.g.*, USTA comments at 20; NYNEX comments at 66; Cincinnati Bell comments at 15; Ameritech comments at 22 (the term "premises" should only include central offices housing network facilities in which the incumbent LEC has the exclusive right of occupancy).

[1392] Bell Atlantic comments at 37.

[1393] Ameritech comments at 22.

[1394] Rural Tel. Coalition comments at 31.

[1395] *See, e.g.*, AT&T comments at 40; *see also* Telecommunications Resellers Ass'n comments at 46; Hyperion comments at 14.

[1396] *See, e.g.*, MFS comments at 23.

the general application of section 251(c)(6).[1397] The Illinois Commission supports our tentative conclusion and argues that collocation should not be restricted to central and tandem offices.[1398]

(3). Discussion

573. The 1996 Act does not address the definition of premises, nor is the term discussed in the legislative history. Therefore, we look to the purposes of the 1996 Act and general uses of the term "premises" in other contexts in order to define this term for purposes of section 251(c)(6). The term "premises" is defined in varying ways, according to the context in which it is used.[1399] In light of the 1996 Act's procompetitive purposes, we find that a broad definition of the term "premises" is appropriate in order to permit new entrants to collocate at a broad range of points under the incumbent LEC's control. A broad definition will allow collocation at points other than those specified for collocation under the existing *Expanded Interconnection* requirements. We find that this result is appropriate because the purposes of physical and virtual collocation under section 251 are broader than those established in the *Expanded Interconnection* proceeding. We therefore interpret the term "premises" broadly to include LEC central offices, serving wire centers and tandem offices, as well as all buildings or similar structures owned or leased by the incumbent LEC that house LEC network facilities. We also treat as incumbent LEC premises any structures that house LEC network facilities on public rights-of-way, such as vaults containing loop concentrators or similar structures.

574. As discussed below, we conclude that section 251(c)(6) requires collocation only where technically feasible. In light of this conclusion, we find that adoption of a definition of "premises" that depends on whether interconnection or access to unbundled network elements at a particular point is "technically feasible," as suggested by Ameritech and Pacific Telesis, would be superfluous. We also conclude that it is not appropriate to adopt a definition of "premises," as suggested by several parties, that is dependent on whether it is "practical" to collocate equipment at a particular point. We note however, that neither

[1397] ALTS reply at 35; MFS reply at 29.

[1398] Illinois Commerce Commission at 33.

[1399] *See Gibbons v. Brandt*, 170 F.2d 385, 387 (7th Cir. 1948) ("the word 'premises' does not have one fixed and absolute meaning. It is to be determined always by its context . . .").

physical nor virtual collocation is required at points where not technically feasible.[1400] We therefore decline to adopt specific requirements regarding collocation at particular points in the LEC network, as suggested by GVNW and others. Because collocation is only required where technically feasible, the approach we here adopt will enable competitors to take advantage of opportunities to collocate equipment without imposing undue burdens on incumbent LECs, whether large or small.

575. We also address the impact on small incumbent LECs. For example, the Rural Tel. Coalition asks that interconnection and collocation points be established in a flexible manner. We have considered the economic impact of our rules in this section on small incumbent LECs. For example, we do not adopt rigid requirements for locations where collocation must be provided. Incumbent LECs are not required to physically collocate equipment in locations where not practical for technical reasons or because of space limitations, and virtual collocation is required only where technically feasible. We also note, however, that section 251(f) of the 1996 Act provides relief to certain small LECs from our regulations implementing section 251.[1401]

d. Collocation Equipment

(1). Background

576. In the *Expanded Interconnection* proceeding, we allowed collocation for central office equipment needed to terminate basic transmission facilities between LEC central offices and third-party premises. Acceptable equipment included optical terminating equipment and multiplexers. We did not require the LECs to permit collocation of enhanced services equipment or customer premises equipment because such equipment was not necessary to foster competition in the provision of basic transmission services. We also did not require LECs to allow the collocation of switches.[1402] Section 251(c)(6) requires incumbent LECs to allow collocation of "equipment necessary for interconnection or access to unbundled elements

[1400] Incumbent LECs are required to permit the collocation of equipment for the purpose of interconnection under section 251(c)(2) or access to unbundled network elements under section 251(c)(3). Interconnection and access to unbundled network elements are only required under these sections at technically feasible points. 47 U.S.C. § 251(c)(2) and (3).

[1401] *See infra*, Section XII.

[1402] *See generally Remand Order*, 9 FCC Rcd at 5178-81 (paras. 82-94); *see also Special Access Order*, 7 FCC Rcd at 7412-16, *Switched Transport Order*, 8 FCC Rcd at 7411-16.

. . . ."[1403] We sought comment in the NPRM on what types of equipment competitors should be permitted to collocate on LEC premises.[1404]

(2). Comments

577. BOCs and other incumbent LECs generally favor limiting the type of equipment allowed to be collocated to transmission equipment necessary to interconnect to LEC networks.[1405] Sprint argues that incumbent LECs should be permitted to limit the amount of space they have to provide to that needed for equipment necessary for the particular type of interconnection that is taking place.[1406] IXCs and CAPs argue that any type of equipment may be collocated absent demonstrable harm to the LEC, and that any arbitrary limit on the types of equipment to be collocated could foreclose efficient methods of interconnection and/or access to unbundled elements.[1407] MFS contends that competing providers should not be required to demonstrate affirmatively that equipment is "necessary" before allowing it to be collocated. The Illinois Commission supports a policy that would not restrict the type of equipment to be collocated except where necessary to prevent harm to the network. The Colorado Commission supports limiting allowable equipment to that used to provide a telecommunications service.[1408] The Association of Telemessaging Services International urges the Commission to require collocation of equipment used to provide enhanced services.[1409]

578. WinStar argues that the 1996 Act establishes its right to place its microwave facilities on the roofs of incumbent LEC buildings in which its termination equipment is to be

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[1403] 47 U.S.C. § 251(c)(6).

[1404] NPRM at para.72.

[1405] *See, e.g.*, SBC comments at 63-64; Bell Atlantic comments at 34; GTE reply at 14; PacTel comments at 38, reply at 13.

[1406] Sprint reply at 23.

[1407] *See, e.g.*, MFS comments at 24; MCI comments at 54-55; Time Warner comments at 39; GCI comments at 10.

[1408] Illinois Commission comments at 34; Colorado Commission comments at 23.

[1409] Association of Telemessaging Services International reply at 16.

collocated in order to ensure that wireline facilities are not favored over wireless, and therefore urges the Commission to adopt a collocation standard that is technology neutral.[1410]

(3). Discussion

579. We believe that section 251(c)(6) generally requires that incumbent LECs permit the collocation of equipment used for interconnection or access to unbundled network elements. Although the term "necessary," read most strictly, could be interpreted to mean "indispensable," we conclude that for the purposes of section 251(c)(6) "necessary" does not mean "indispensable" but rather "used" or "useful." This interpretation is most likely to promote fair competition consistent with the purposes of the Act. (We note that this view is consistent with the findings of the Colorado Commission).[1411] Thus, we read section 251(c)(6) to refer to equipment used for the purpose of interconnection or access to unbundled network elements.[1412] Even if the collocator could use other equipment to perform a similar function, the specified equipment may still be "necessary" for interconnection or access to unbundled network elements under section 251(c)(6). We can easily imagine circumstances, for instance, in which alternative equipment would perform the same function, but with less efficiency or at greater cost. A strict reading of the term "necessary" in these circumstances could allow LECs to avoid collocating the equipment of the interconnectors' choosing, thus undermining the procompetitive purposes of the 1996 Act.

580. Consistent with this interpretation, we conclude that transmission equipment, such as optical terminating equipment and multiplexers, may be collocated on LEC premises. We also conclude that LECs should continue to permit collocation of any type of equipment currently being collocated to terminate basic transmission facilities under the *Expanded Interconnection* requirements. In addition, whenever a telecommunications carrier seeks to collocate equipment for purposes within the scope of section 251(c)(6), the incumbent LEC shall prove to the state commission that such equipment is not "necessary," as we have defined that term, for interconnection or access to unbundled network elements. State commissions may designate specific additional types of equipment that may be collocated pursuant to section 251(c)(6).

[1410] WinStar comments at 4, reply at 4.

[1411] Colorado Public Utilities Commission, *Proposed Rules Regarding Implementation of §§ 40-15-101* et. seq., *Requirements Relating to Interconnection and Unbundling*, Docket No. 95R-556T, (Colorado Commission, March 29, 1996) at 19-20.

[1412] *Cf. National Railroad Passenger Corporation v. Boston and Maine Corp.*, 503 U.S. 407, 417 (1992) (upholding the ICC's interpretation of the word "required" as "useful or appropriate," rather than "indispensable"); *McCulloch v. Maryland*, 4 Wheat. 316, 413 (1819) (Chief Justice Marshall read the word "necessary" to mean "convenient, or useful," rejecting a stricter reading of the term).

581. We do not find, however, that section 251(c)(6) requires collocation of equipment used to provide enhanced services, contrary to the arguments of the Association of Telemessaging Services International.[1413] We also decline to require incumbent LECs to allow collocation of any equipment without restriction.[1414] Section 251(c)(6) requires collocation only of equipment "necessary for interconnection or access to unbundled elements." Section 251(c)(2) requires incumbent LECs to provide "interconnection" for the "transmission and routing of telephone exchange service and exchange access," and section 251(c)(3) requires incumbent LECs to provide access to unbundled network elements "for the provision of a telecommunications service."[1415] Section 251(c)(6) therefore requires incumbent LECs to provide physical or virtual collocation only for equipment "necessary" or used for those purposes. We find that section 251(c)(6) does not require collocation of equipment necessary to provide enhanced services.[1416] At this time, we do not impose a general requirement that switching equipment be collocated since it does not appear that it is used for the actual interconnection or access to unbundled network elements.[1417] We recognize, however, that modern technology has tended to blur the line between switching equipment and multiplexing equipment, which we permit to be collocated. We expect, in situations where the functionality of a particular piece of equipment is in dispute, that state commissions will determine whether the equipment at issue is actually used for interconnection or access to unbundled elements. We also reserve the right to reexamine this issue at a later date if it appears that such action would further achievement of the 1996 Act's procompetitive goals. Finally, because we lack an adequate record on the issue, we decline to adopt AT&T's

[1413] ATSI reply at 16.

[1414] *See, e.g.*, MFS comments at 24.

[1415] 47 U.S.C. § 251(c)(3).

[1416] We note that we declined to require collocation of enhanced services equipment in our *Computer III* and *ONA* proceedings. *See Third Computer Inquiry*, Report and Order, 104 FCC 2d 958, 1037-38 (1986); *Computer III Remand*, 6 FCC Rcd 7571 (1991). Enhanced services are defined as services that "employ computer processing applications which act on the format, content, code, protocol or similar aspects of the subscriber's transmitted information; provide the subscriber additional, different, or restructured informatic or involve subscriber interaction with stored information." 47 C.F.R. § 64.702. This definition appears not to include the provision of "telecommunications services." *See* 47 U.S.C. § 153(43), (46).

[1417] If switching equipment is located at the collocated space, generally the only equipment used for interconnection or access to unbundled elements is the cross-connect equipment. The switching equipment generally perform other functions.

proposal that we require that incumbent LECs allow collocated equipment to be used for "hubbing."[1418]

582. In response to WinStar's suggestion that we require collocation of microwave transmission facilities, we note that collocation of microwave transmission equipment was required where reasonably feasible by the *Special Access Order*.[1419] We also require the collocation of microwave equipment under section 251, although we modify the *Expanded Interconnection* standard we adopt under section 251 for when such collocation is required slightly to conform to the standard for the provision of physical collocation in section 251(c)(6). We therefore require that incumbent LECs allow competitors to use physical collocation for microwave transmission facilities except where this is not practical for technical reasons or because of space limitations, in which case virtual collocation is required where technically feasible.[1420]

e. Allocation of Space

(1). Background

583. In the *Expanded Interconnection* proceeding, we required LECs to allocate space for physical collocation on a first-come, first-served basis. We also required LECs to take into account interconnector demand for collocation space when reconfiguring space or building new central offices, and we found that imposing reasonable restrictions on warehousing of space by collocating carriers was appropriate.[1421] The NPRM sought comment on whether national guidelines would deter anticompetitive behavior through the manipulation or unreasonable allocation of space by either incumbent LECs or new entrants.[1422]

(2). Comments

[1418] AT&T advocates requiring LECs to allow new entrants to "connect additional equipment of their own to their collocated equipment in the collocated space." Letter from Betsy Brady, Federal Government Affairs Director and Attorney, to Robert McDonald, Common Carrier Bureau, July 12, 1996, at 3, n.2 (AT&T July 12, 1996 *Ex Parte*). *See also* AT&T comments at 40 n. 51.

[1419] *Special Access Order*, 7 FCC Rcd at 7416; *see also Remand Order*, 9 FCC Rcd at 5178-79.

[1420] Under our technical feasibility standard, the costs of any construction necessary to accommodate the proposed interconnection arrangement are to be borne by the party seeking to interconnect. *See supra*, Section IV.E.

[1421] *Special Access Order*, 7 FCC Rcd at 7408.

[1422] NPRM at para.72.

584. CAPs and IXCs support adoption of rules governing incumbent LEC space allocation. AT&T asserts that incumbent LECs should be required to consider the needs of collocators when remodeling or building new facilities.[1423] MFS and Teleport contend that incumbent LECs should not be able to limit the amount of space that may be occupied by an interconnector's equipment unless the incumbent LEC demonstrates that space is nearing exhaustion.[1424] MCI asserts that we should prohibit an incumbent LEC from denying a collocator use of available space unless the incumbent demonstrates that it had plans for such space prior to the request for collocation.[1425] In locations where space is scarce, MCI argues that incumbent LECs should be required to file reports with the FCC on the status and planned increase and use of space.[1426] Bell Atlantic counters that such a policy could prevent it from serving its customers efficiently.[1427] Pacific Telesis suggests that the Commission reiterate its policy of allowing "reasonable restrictions on warehousing of unused space by interconnectors."[1428] The Pennsylvania Commission asserts that it is not necessary for the FCC to adopt national guidelines regarding space allocation.[1429] GVNW argues that collocation should be required in rural areas only where there is space available.[1430]

(3). Discussion

585. We believe that incumbent LECs have the incentive and capability to impede competitive entry by minimizing the amount of space that is available for collocation by competitors. Accordingly, we adopt our *Expanded Interconnection* space allocation rules for purposes of section 251, except as indicated herein. LECs will thus be required to make space available to requesting carriers on a first-come, first-served basis. We also conclude

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[1423] AT&T comments at 41-42 (where space is unavailable incumbent LECs should be required to provide trunking at no extra cost and enable the interconnector to connect to designated equipment elsewhere, with a timetable for moving the interconnector to the incumbent LEC's premises when space becomes available).

[1424] MFS comments at 34; Teleport comments at 33.

[1425] MCI comments at 56.

[1426] MCI comments at 56.

[1427] Bell Atlantic reply at 16.

[1428] PacTel comments at 36.

[1429] Pennsylvania Commission comments at 22.

[1430] GVNW comments at 8.

that collocators seeking to expand their collocated space should be allowed to use contiguous space where available. We further conclude that LECs should not be required to lease or construct additional space to provide physical collocation to interconnectors when existing space has been exhausted. We find such a requirement unnecessary because section 251(c)(6) allows incumbent LECs to provide virtual collocation where physical collocation is not practical for technical reasons or because of space limitations. Consistent with the requirements and findings of the *Expanded Interconnection* proceeding, we conclude that incumbent LECs should be required to take collocator demand into account when renovating existing facilities and constructing or leasing new facilities, just as they consider demand for other services when undertaking such projects. We find that this requirement is necessary in order to ensure that sufficient collocation space will be available in the future. We decline, however, to adopt a general rule requiring LECs to file reports on the status and planned increase and use of space. State commissions will determine whether sufficient space is available for physical collocation, and we conclude that they have authority under the 1996 Act to require incumbent LECs to file such reports. We expect individual state commissions to determine whether the filing of such reports is warranted.

586. We also agree with Pacific Telesis that restrictions on warehousing of space by interconnectors are appropriate.[1431] Because collocation space on incumbent LEC premises may be limited, inefficient use of space by one competitive entrant could deprive another entrant of the opportunity to collocate facilities or expand existing space. In the *Expanded Interconnection* proceeding, we allowed "reasonable restrictions on warehousing of space,"[1432] and will adopt this provision for purposes of section 251. As discussed below, we also adopt measures to ensure that incumbent LECs themselves do not unreasonably "warehouse" space, although we do permit them to reserve a limited amount of space for specific future uses.[1433] Incumbent LECs, however, are not permitted to set maximum space limitations without demonstrating that space constraints make such restrictions necessary, as such maximum limits could constrain a collocator's ability to provide service efficiently.

587. We also address the impact on small incumbent LECs. For example, GVNW argues that we should require collocation in rural areas only where there is space available. We have considered the impact of our rules in this section on small incumbent LECs and do not require physical collocation at any point where there is insufficient space available. We decline, however, to adopt rules regarding space availability that apply differently to small, rural carriers because the rules we here adopt are sufficiently flexible. We also note,

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[1431] PacTel comments at 36.

[1432] *Special Access Order*, 7 FCC Rcd at 7408; *see also Remand Order*, 9 FCC Rcd at 187-88.

[1433] *See infra*, Section VI.B.1.i.

however, that section 251(f) of the 1996 Act provides relief to certain small LECs from our regulations implementing section 251.[1434]

f. Leasing Transport Facilities

(1). Background

588. Our *Expanded Interconnection* rules require LECs to provide collocation for the purpose of allowing collocators to terminate their own transmission facilities for special access or switched transport service.[1435] We did not require that collocation be made available for other purposes, for example, when the interconnecting party wished only to connect incumbent LEC transmission facilities to collocated equipment. We sought comment in the NPRM on whether we should modify the standards of the *Expanded Interconnection* proceeding in light of the new statutory requirements and disputes that have arisen in the investigations regarding the incumbent LECs' physical and virtual collocation tariffs.[1436]

(2). Comments

589. MCI and others argue that collocators should not be prohibited from leasing transport facilities from the incumbent LEC to connect equipment in the collocated space to any other point in the incumbent LEC's network.[1437] Pacific Telesis contends that LECs should not be required to permit collocation of equipment that will be connected to a LEC's transmission facilities because such a policy would result in exhaustion of central office space and is outside the purposes of the 1996 Act.[1438] Bell Atlantic argues that permitting such interconnection is not advisable, because it would allow resellers to obtain lower-priced interconnection and access to unbundled elements without providing any facilities of their own.[1439]

[1434] *See infra*, Section XII.

[1435] *See Remand Order*, 9 FCC Rcd at 5180-81, 5183; *Special Access Order*, 7 FCC Rcd at 7403; *Switched Transport Order*, 8 FCC Rcd at 7402.

[1436] NPRM at para. 73.

[1437] MCI comments at 55; ACTA comments at 16; Telecommunications Resellers Ass'n comments at 47.

[1438] PacTel comments at 39, reply at 14.

[1439] Bell Atlantic reply at 16.

(3). Discussion

590. Although in *Expanded Interconnection* the Commission required that interested parties interconnect collocated equipment with their own transmission facilities,[1440] we conclude that it would be inconsistent with the provisions of the 1996 Act to adopt that requirement under section 251. Rather, we conclude that a competitive entrant should not be required to bring transmission facilities to LEC premises in which it seeks to collocate facilities. Entrants should instead be permitted to collocate and connect equipment to unbundled network transmission elements obtained from the incumbent LEC. The purpose of the *Expanded Interconnection* requirement was to foster competition in the market for interstate switched and special access transmission facilities.[1441] The purposes of section 251 are broader. Section 251(c)(3) requires that competitive entrants be given access to unbundled elements and that they be permitted to combine such elements.[1442] Prohibiting competitors from connecting unbundled network elements to their collocated equipment would appear contrary to the provisions of section 251(c)(3).

591. Finally, we find that Bell Atlantic's opposition to this requirement is without merit. Bell Atlantic argues that collocators should be required to provide their own transmission facilities because otherwise new entrants could compete without providing any of their own facilities. Section 251(c)(3) specifically states that unbundled elements are to be provided in a manner that allows requesting carriers to combine elements in order to provide telecommunications service. As stated above, requiring collocators to supply their own transmission facilities would amount to a prohibition on connecting unbundled transmission facilities to other unbundled elements connected to equipment in the collocation space. Although such interconnection arrangements were not required by our *Expanded Interconnection* requirements, we conclude that they are required by section 251 when collocated equipment is used to achieve interconnection or access to unbundled network elements.

g. Co-Carrier Cross-Connect

(1). Background

592. In the most common collocation configuration under existing requirements, the designated physical collocation space of several competitive entrants is located close together

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[1440] *Special Access Order*, 7 FCC Rcd at 7403; *Switched Transport Order*, 8 FCC Rcd at 7402.

[1441] *See Special Access Order*, 7 FCC Rcd at 7372; *Switched Transport Order*, 8 FCC Rcd at 7377.

[1442] 47 U.S.C. 251(c)(3).

within the LEC premises. Since carriers connect to the collocation space via high-capacity lines, different competitive entrants seeking to interconnect with each other may find connecting between their respective collocation spaces on the LEC premises the most efficient means of interconnecting with each other. We sought comment in the NPRM on whether we should adopt any requirements in addition to those adopted in the *Expanded Interconnection* proceeding in order to fulfill the mandate of the 1996 Act.[1443]

(2). Comments

593. Several CAPs and IXCs argue that we should adopt as an additional requirement that interconnectors be allowed to connect directly to other collocators located at the collocation space.[1444] Incumbent LECs generally object to such a configuration on the basis that such access is not expressly required by the statute and that we therefore lack authority to impose such a requirement.[1445]

(3). Discussion

594. We believe that it serves the public interest and is consistent with the policy goals of section 251 to require that incumbents permit two or more collocators to interconnect their networks at the incumbent's premises. Parties opposed to this proposal have offered no legitimate objection to such interconnection. Allowing incumbent LECs to prohibit collocating carriers from interconnecting their collocated equipment would require them to interconnect collocated facilities by routing transmission facilities outside of the LECs' premises. We find that such a policy would needlessly burden collocating carriers. To the extent equipment is collocated for the purposes expressly permitted under section 251(c)(6), the statute does not bar us from requiring that incumbent LECs allow connection of such equipment to other collocating carriers located nearby. We find that requiring LECs to allow such interconnection of collocated equipment will foster competition by promoting efficient operation. It is also unlikely to have a significant effect on space availability. We find authority for such a requirement in section 251(c)(6), which requires that collocation be provided on "terms and conditions that are just, reasonable, and nondiscriminatory" and in section 4(i), which permits the Commission to "perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this Act, as may be necessary in the

[1443] NPRM at para. 73.

[1444] *See, e.g.*, MCI comments at 55; MFS comments at 24; GGI comments at 10; Telecommunications Resellers Ass'n comments at 47; Intermedia comments at 9.

[1445] *See, e.g.*, GTE reply at 15; Bell Atlantic reply at 15; PacTel reply at 14; Sprint reply at 23.

execution of its functions."[1446] We therefore will require that incumbent LECs allow collocating telecommunications carriers to connect collocated equipment to such equipment of other carriers within the same LEC premises so long as the collocated equipment is used for interconnection with the incumbent LEC or access to the LEC's unbundled network elements.

595. We clarify that we here require incumbent LECs to provide the connection between the equipment in the collocated spaces of two or more collocating telecommunications carriers unless they permit the collocating parties to provide this connection for themselves. We do not require incumbent LECs to allow placement of connecting transmission facilities owned by competitors within the incumbent LEC premises anywhere outside of the actual physical collocation space.

h. Security Arrangements

(1). Background

596. Under our *Expanded Interconnection* requirements, incumbent LECs typically require that physically collocated equipment be placed inside a collocation cage within the incumbent LEC facility. Such cages are intended to separate physically the competitors' facilities from those of the incumbent and to prevent access by unauthorized personnel to any parties' equipment. Such cages frequently add considerably to the cost of establishing physical collocation at a particular LEC premises and could constitute a barrier to entry in certain circumstances.

(2). Comments

597. Teleport argues that cage construction is one of the most expensive items associated with physical collocation and that we should modify our *Expanded Interconnection* requirements to allow new entrants to subcontract construction of their physical collocation security arrangements with contractors approved by the incumbent LEC.[1447] ALTS and MCI argue that security measures should only be provided at the request of the entrant and at the cost the entrant would have incurred if it performed the construction itself.[1448] GVNW

[1446] 47 U.S.C. § 154(i).

[1447] Teleport comments at 32.

[1448] ALTS comments at 23; MCI comments at 58; *contra* PacTel reply at 15.

argues that incumbent LECs need to ensure that a competitor's personnel do not cause breaches of security and therefore should be subject to minimum proficiency requirements.[1449]

(3). Discussion

598. Based on the comments in this proceeding and our previous experience with physical collocation in the *Expanded Interconnection* docket, we will continue to permit LECs to require reasonable security arrangements to separate an entrant's collocation space from the incumbent LEC's facilities. The physical security arrangements around the collocation space protect both the LEC's and competitor's equipment from interference by unauthorized parties. We reject the suggestion of ALTS and MCI that security measures be provided only at the request of the entrant since LECs have legitimate security concerns about having competitors' personnel on their premises as well. We conclude that the physical separation provided by the collocation cage adequately addresses these concerns. At the same time, we recognize that the construction costs of physical security arrangements could serve as a significant barrier to entry, particularly for smaller competitors. We also conclude that LECs have both an incentive and the capability to impose higher construction costs than the new entrant might need to incur. We therefore conclude that collocating parties should have the right to subcontract the construction of the physical collocation arrangements with contractors approved by the incumbent LEC. Incumbent LECs shall not unreasonably withhold such approval of contractors. Approval by incumbent LECs of such contractors should be based on the same criteria as such LECs use for approving contractors for their own purposes. We decline, however, to require that competitive entrants' personnel be subject to minimum training and proficiency requirements as suggested by GVNW. We find that such concerns are better resolved through negotiation and arbitration.

i. Allowing Virtual Collocation in Lieu of Physical

(1). Background

599. Section 251(c)(6) requires that incumbent LECs provide physical collocation unless the carrier "demonstrates to the state commission that physical collocation is not practical for technical reasons or because of space limitations . . . ."[1450] In the NPRM, we sought comment on whether the Commission should establish guidelines for states to apply

[1449] GVNW comments at 10; *accord* Rural Tel. Coalition comments at 31.

[1450] 47 U.S.C.§ 251(c)(6).

when determining whether physical collocation is not practical for "technical reasons or because of space limitations."[1451]

(2). Comments

600. Pacific Telesis argues that national standards to determine whether physical collocation is not practical at a specific LEC location are unnecessary. It further argues that "reduced reliability or other harm to the network" should be considered a technical reason that justifies refusal to allow physical collocation.[1452] IXCs and CAPs assert that the burden of showing that physical collocation is not practical should fall on the incumbent LEC.[1453] AT&T contends that an incumbent LEC should be required to show that there is no practical way of providing additional space before it is relieved of its obligation to provide physical collocation. If physical collocation is genuinely not practical, then AT&T argues that the incumbent should provide trunking at no cost to allow the entrant to interconnect.[1454] Time Warner asserts that, where physical collocation is not possible in a LEC central office, LECs should supply a substitute at cost.[1455] State commissions that comment on this issue generally oppose strict national rules and argue that, to the extent such rules are adopted, they should allow the states maximum flexibility.[1456]

601. Time Warner also asserts that the FCC should require LECs to offer a $1 sale and repurchase option for virtually collocated equipment.[1457] The Independent Cable and Telecommunications Association argues that incumbent LECs should be required to provide virtual collocation that is equal in all functional aspects to physical collocation in order to

[1451] NPRM para. 72.

[1452] PacTel comments at 39.

[1453] *See, e.g.*, Hyperion comments at 14; ACSI comments at 16; AT&T comments at 41.

[1454] AT&T comments at 41-42.

[1455] Time Warner comments at 36, 40.

[1456] *See, e.g.*, Texas Commission comments at 14; Pennsylvania Commission comments at 22; Oregon Commission comments at 23.

[1457] Time Warner comments at 38.

avoid prejudicing small entities that may not have sufficient market share to justify a physical collocation arrangement.[1458]

(3). Discussion

602. Section 251(c)(6) clearly contemplates the provision of virtual collocation when physical collocation is not practical for technical reasons or because of space limitations.[1459] Section 251(c)(6) requires the incumbent LEC to demonstrate to the state commission's satisfaction that there are space limitations on the LEC premises or that technical considerations make collocation impractical. Because the space limitations and technical practicality issues will vary considerably depending on the location at which competitor equipment is to be collocated, we find that these issues are best handled on a case-by-case basis, as they were under our *Expanded Interconnection* requirements.[1460] In light of our experience in the *Expanded Interconnection* proceeding, we require that incumbent LECs provide the state commission with detailed floor plans or diagrams of any premises where the incumbent alleges that there are space constraints. Submission of floor plans will enable state commissions to evaluate whether a refusal to allow physical collocation on the grounds of space constraints is justified. We also find that the approach detailed by AT&T in its July 12 *Ex Parte* submission to be useful and believe that state commissions may find it a valuable guide.[1461]

603. Although section 251(c)(6) provides that incumbent LECs are not required to provide physical collocation where impractical for technical reasons or because of space limitations, our experience in the *Expanded Interconnection* proceeding has not demonstrated that technical reasons, apart from those related to space availability, are a significant impediment to physical collocation. We therefore decline to adopt any rules for determining when physical collocation should be deemed impractical for technical reasons.

604. Incumbent LECs are allowed to retain a limited amount of floor space for defined future uses. Allowing competitive entrants to claim space that incumbent LECs had

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[1458] ICTA reply at 13.

[1459] 47 U.S.C § 251(c)(6).

[1460] *See Special Access Order*, 7 FCC Rcd 7407.

[1461] AT&T describes a detailed proposed showing that would be required of an incumbent LEC that claims physical collocation is not practical because of space exhaustion. The proposed showing would require the specific identification of the space on incumbent LEC premises that is used for various purposes, as well as specific plans for rearrangement/expansion and identification of steps taken to avoid exhaustion. AT&T July 12, 1996 *Ex Parte*.

specifically planned to use could prevent incumbent LECs from serving their customers effectively.[1462] Incumbent LECs may not, however, reserve space for future use on terms more favorable than those that apply to other telecommunications carriers seeking to hold collocation space for their own future use.[1463]

605. We decline to adopt AT&T's suggestion that incumbent LECs should be required to lease additional space or provide trunking at no cost where they have insufficient space for physical collocation.[1464] In light of the availability of substitute virtual collocation arrangements, we find that requiring the type of "substitute" for physical collocation as advocated by AT&T is unnecessary. We similarly reject Time Warner's suggestion that incumbent LECs supply a "substitute" for physical collocation at cost, except to the extent we require virtual collocation. On the other hand, we will require incumbent LECs with limited space availability to take into account the demands of interconnectors when planning renovations and leasing or constructing new premises, as we have in the *Expanded Interconnection* proceeding.[1465]

606. Incumbent LECs are not required to provide collocation at locations where it is not technically feasible to provide virtual collocation. Although space constraints are a concern normally associated with physical collocation, given our broad reading of the term "premises,"[1466] we find that space constraints could preclude virtual collocation at certain LEC premises as well. State commissions will decide whether virtual collocation is technically feasible at a given point. We do, however, require that incumbent LECs relinquish any space held for future use before denying virtual collocation due to a lack of space unless the incumbent can prove to a state commission that virtual collocation at that point is not technically feasible. Moreover, when virtual collocation is not feasible, we require that incumbent LECs provide other forms of interconnection and access to unbundled network elements to the extent technically feasible.[1467]

[1462] *Special Access Order*, 7 FCC Rcd at 7409.

[1463] *See supra*, Section VI.B.1.e.

[1464] *See* AT&T comments at 41-42.

[1465] *See Special Access Order*, 7 FCC Rcd at 7408.

[1466] *See supra*, Section VI.B.1.c.

[1467] *See supra*, Section VI.A.

607. Finally, we decline to require that incumbent LECs provide virtual collocation that is equal in all functional aspects to physical collocation. Our *Expanded Interconnection* rules required a variety of standards for the virtual collocation and have been largely successful. In addition, Congress was aware of the differences between virtual and physical collocation when it adopted section 251(c)(6), and this section does not specify any requirements for virtual collocation.[1468] As discussed above, we adopt the *Expanded Interconnection* requirements for virtual collocation under section 251.[1469] We find, however, that a standard simply requiring equality in all functional aspects could be difficult to administrate and could lead to substantial disputes. We also decline to adopt the suggestion that we require LECs to offer virtual collocation under the "$1 sale and repurchase option."[1470] We do not find evidence that such a specific requirement is necessary at this time. We reserve the right to revisit these issues in the future, however, if we perceive that smaller entities would be disadvantaged by our existing standards.

2. Legal Issues

a. Relationship between *Expanded Interconnection* Tariffs and Section 251

(1). Background

608. The enactment of sections 251 and 252 raises the question of whether, and to what extent, the interconnection, access to unbundled network element, and collocation requirements set forth in those sections, and the delegation of specific rate-setting authority to the states under section 252(d)(1), as a matter of law supplant our section 201 *Expanded Interconnection* requirements. We tentatively concluded in the NPRM that our existing *Expanded Interconnection* policies for interstate special access and switched transport should continue to apply.[1471]

(2). Comments

[1468] *See Remand Order*, 9 FCC Rcd at 5166-69.

[1469] *See supra*, Section VI.B.1.a.

[1470] This configuration is described as involving "the acquisition by the interconnectors of the equipment to be dedicated for interconnectors' use on the LEC premises and the sale of that equipment to the LECs for a nominal $1 sum while maintaining a repurchase option." Time Warner comments at 42.

[1471] NPRM at para. 73.

609. Although commenting parties have not addressed this question directly, some commenters appear to assume that LECs will be required to continue to tariff their collocation offerings with the FCC, as currently required under *Expanded Interconnection*.[1472] Other parties appear to assume that requirements to file federal tariffs are inconsistent with, and superseded by, the negotiation and arbitration provisions in section 252.

(3). Discussion

610. Our *Expanded Interconnection* rules require the largest incumbent LECs to file tariffs with the Commission to offer collocation to parties that wish to terminate interstate special access and switched transport transmission facilities. Section 252 of the 1996 Act, on the other hand, provides for interconnection arrangements rather than tariffs, for review and approval of such agreements by state commissions rather than the FCC, and for public filing of such agreements. Section 252 procedures, however, apply only to "request[s] for interconnection, services, or network elements *pursuant to section 251*."[1473] Such procedures do not, by their terms, apply to requests for service under section 201. Moreover, section 251(i) expressly provides that "[n]othing in this section shall be construed to limit or otherwise affect the Commission's authority under section 201,"[1474] which provided the statutory basis for our *Expanded Interconnection* rules. Thus, we find that the 1996 Act, as a matter of law, does not displace our *Expanded Interconnection* requirements, and, in fact, grants discretion to the FCC to preserve our existing rules and tariffing requirements to the extent they are consistent with the Communications Act.

611. We further conclude that it would make little sense to find that sections 251 and 252 supersede our *Expanded Interconnection* rules, because the two sets of requirements are not coextensive. For example, our *Expanded Interconnection* rules encompass collocation for interstate purposes for all parties, including non-carrier end users, that seek to terminate transmission facilities at LEC central offices.[1475] In comparison, section 251 requires collocation only for "any requesting telecommunications carrier."[1476] Certain competing carriers -- and non-carrier customers not covered by section 251 -- may prefer to take

[1472] *See, e.g.*, MFS comments at 32; MCI comments at 58.

47 U.S.C § 252(a)(1) (emphasis added).

Section 201 authorizes the Commission "to establish physical connections with other carriers . . ." 47 U.S.C. 1.

pecial Access Order, 7 FCC Rcd at 7403.

e 47 U.S.C. § 251(c)(2) and (3).

interstate expanded interconnection service under general interstate tariff schedules. We find that it would be unnecessarily disruptive to eliminate that possibility at this time. We also conclude that permitting requesting carriers to seek interconnection pursuant to our *Expanded Interconnection* rules as well as section 251 is consistent with the goals of the 1996 Act to permit competitive entry through a variety of entry strategies. Thus, a requesting carrier would have the choice of negotiating an interconnection agreement pursuant to sections 251 and 252 or of taking tariffed interstate service under our *Expanded Interconnection* rules.

612. Finally, we expect that, over time, sections 251 and 252 and our implementing rules may replace our *Expanded Interconnection* rules as the primary regulations governing interconnection for carriers. We note that section 251 is broader than our *Expanded Interconnection* requirements in certain respects. For example, section 251 requires incumbent LECs to offer collocation for purposes of accessing unbundled network elements, whereas our *Expanded Interconnection* rules require collocation only for the provision of interstate special access and switched transport.[1477] In addition, section 251(c)(6) requires incumbents to offer physical collocation subject to certain exceptions, whereas our existing *Expanded Interconnection* rules only require carriers to offer virtual collocation, although they may choose to offer physical collocation under Title II regulation in lieu of virtual collocation. In the future, we may review the need for a separate set of *Expanded Interconnection* requirements and revise our requirements if necessary. We believe that this approach is consistent with Congress' determination that the need for federal regulations will likely decrease as the provisions of the 1996 Act take effect and competition develops in the local exchange and exchange access markets.[1478]

b. Takings Issues

(1). Background

613. In *Bell Atlantic v. FCC*, the U.S. Court of Appeals for the D.C. Circuit found that the Commission lacked authority under the Communications Act to impose physical collocation on the LECs. The court found that this requirement implicated the Fifth Amendment takings clause.[1479] On remand, the Commission required LECs to provide virtual

[1477] *See Special Access Order*, 7 FCC Rcd 7369; *Switched Transport Order*, 8 FCC Rcd 7372.

[1478] *See, e.g.*, 47 U.S.C. § 161 (requiring the Commission to "review all regulations . . . in effect at the time of the review that apply to the operations or activities of any provider of telecommunications service.").

[1479] *See Bell Atlantic v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994).

collocation. In *Pacific Bell v. FCC*,[1480] several LECs challenged the Commission's virtual collocation rules on essentially identical grounds, claiming that the virtual collocation rules also constituted an unauthorized taking. The court did not reach the merits of these claims. Instead, addressing the scope of section 251 immediately following enactment and before the FCC had yet exercised its interpretive authority with respect to the provision, the court stated that regulations enacted to implement the 1996 Act would render moot questions regarding the future effect of the virtual collocation order under review. The court did not vacate the order, but remanded to the Commission the issues presented in that case.[1481]

(2). Comments

614. U S West and BellSouth argue that virtual collocation is a taking and that the Commission lacks authority under section 201 to require virtual collocation under its *Expanded Interconnection* rules.[1482] U S West also argues that the Commission lacks authority to require virtual collocation under section 251.[1483] Some incumbent LECs and the Florida Commission also argue that physical collocation amounts to a taking in violation of the Fifth Amendment.[1484] In opposition, several competitive carriers argue that rates that recover incremental costs of collocation will satisfy constitutional "just compensation concerns."[1485]

(3). Discussion

615. We conclude that the ruling in *Bell Atlantic* does not preclude the rules we are adopting in this proceeding. The court in *Bell Atlantic* did not hold that an agency may never "take" property; the court acknowledged that, as a constitutional matter, takings are unlawful

[1480] 81 F.3d 1147 (D.C. Cir. 1996).

[1481] *Id.*

[1482] U S West comments at 29-30; BellSouth comments at 25.

[1483] U S West comments at 30.

[1484] ALLTEL comments at 9; GTE comments at 66-68; US West comments at 29-31; Florida Commission comments at 15 (readoption of old physical collocation rules would be invalidated as a taking but should be readopted as model rules for the states to adopt if they chose).

[1485] MFS reply at 23; ACSI reply at 8-9; GST reply 14; ALTS reply at 8-11.

only if they are not accompanied by "just compensation."[1486] Instead, the court simply said that the Communications Act of 1934 should not be construed to permit the FCC to take LEC property without *express* authorization. Because the court concluded that mandatory physical collocation would likely constitute a taking,[1487] and that section 201 of the Act did not expressly authorize physical collocation, the court held that the Commission was without authority under section 201 to impose physical collocation requirements on LECs.[1488]

616. The question of statutory authority to impose (physical or virtual) collocation obligations on incumbent LECs largely evaporates in the context of the 1996 Act. New section 251(c)(6) *expressly* requires incumbent LECs to provide physical collocation, absent space or technical limitations. Where such limitations exist, the statute *expressly* requires virtual collocation. Thus, under the court's analysis in *Bell Atlantic*, there is no warrant for a narrowing construction of section 251 that would deny us the authority to require either form of collocation. Moreover, for the reasons stated in the *Virtual Collocation Order*,[1489] we continue to believe that virtual collocation, as we have defined it, is not a taking, and that our authority to order such collocation (under either section 251 or section 201) is not subject to the strict construction canon announced in *Bell Atlantic*.

617. Given that we now have express statutory authority to order physical and virtual collocation pursuant to section 251, any remaining takings-related issue necessarily is limited to the question of just compensation. As discussed in Section VII.B.2.a.(3).(c), below, we find that the ratemaking methodology we are adopting to implement the collocation obligations under section 251(c) is consistent with congressional intent and fully satisfies the just compensation standard. There is, therefore, no merit to the LECs' Fifth Amendment-based claims.

[1486] *Bell Atlantic*, 24 F.3d at 1445.

[1487] The Commission maintains the position that mandatory physical collocation should not properly be seen to create a takings issue. *See Remand Order*, 9 FCC Rcd at 5169.

[1488] *See Bell Atlantic*, 24 F.3d at 1447 ("we hold that the Act does not expressly authorize an order of physical co-location and thus the Commission may not impose it.").

[1489] *See* 9 FCC Rcd at 5161-66.

VII. PRICING OF INTERCONNECTION AND UNBUNDLED ELEMENTS

A. Overview

618. The prices of interconnection and unbundled elements, along with prices of resale and transport and termination, are critical terms and conditions of any interconnection agreement. If carriers can agree on such prices voluntarily without government intervention, these agreements will be submitted directly to the states for approval under section 252. To the extent that the carriers, in voluntary negotiations, cannot determine the prices, state commissions will have to set those prices. The price levels set by state commissions will determine whether the 1996 Act is implemented in a manner that is *pro-competitor* and favors one party (whether favoring incumbents or entrants) or, as we believe Congress intended, *pro-competition*. As discussed more fully in Section II.D. above, it is therefore critical to implementing Congress's pro-competitive, de-regulatory national policy framework to establish among the states a common, pro-competition understanding of the pricing standards for interconnection and unbundled elements, resale, and transport and termination. While such a common interpretation might eventually emerge through judicial review of state arbitration decisions, we believe that such a process could delay competition for years and require carriers to incur substantial legal costs.[1490] We therefore conclude that, to expedite the development of fair and efficient competition, we must set forth rules now establishing this common, pro-competition understanding of the 1996 Act's pricing standards. Accordingly, the rules we adopt today set forth the methodological principles for states to use in setting prices. This section addresses interconnection and unbundled elements, and subsequent sections address resale and transport and termination, respectively.

619. While every state should, to the maximum extent feasible, immediately apply the pricing methodology for interconnection and unbundled elements that we set forth below, we recognize that not every state will have the resources to implement this pricing methodology immediately in the arbitrations that will need to be decided this fall. Therefore, so that competition is not impaired in the interim, we establish default proxies that a state commission shall use to resolve arbitrations in the period before it applies the pricing methodology. In most cases, these default proxies for unbundled elements and interconnection are ceilings, and states may select lower prices. In one instance, the default proxy we establish is a price range. Once a state sets prices according to an economic cost study conducted pursuant to the cost-based pricing methodology we outline, the defaults cease to apply. In setting a rate pursuant to the cost-based pricing methodology, and especially when setting a rate above a default proxy ceiling or outside the default proxy range, the state must give full and fair effect to the economic costing methodology we set forth in this Order and must create a factual record, including the cost study, sufficient for purposes of review after notice and opportunity for the affected parties to participate.

[1490] For a discussion of our legal authority to adopt national pricing rules, *see supra*, Section II.D.

620. In the following sections, we first set forth generally, based on the current record, a cost-based pricing methodology based on forward-looking economic costs, which we conclude is the approach for setting prices that best furthers the goals of the 1996 Act. In dynamic competitive markets, firms take action based not on embedded costs, but on the relationship between market-determined prices and forward-looking economic costs. If market prices exceed forward-looking economic costs, new competitors will enter the market. If their forward-looking economic costs exceed market prices, new competitors will not enter the market and existing competitors may decide to leave. Prices for unbundled elements under section 251 must be based on cost under the law, and that should be read as requiring that prices be based on forward-looking economic costs. New entrants should make their decisions whether to purchase unbundled elements or to build their own facilities based on the relative economic costs of these options. By contrast, because the cost of building an element is based on forward-looking economic costs, new entrants' investment decisions would be distorted if the price of unbundled elements were based on embedded costs. In arbitrations of interconnection arrangements, or in rulemakings the results of which will be applied in arbitrations, states must set prices for interconnection and unbundled network elements based on the forward-looking, long-run, incremental cost methodology we describe below. Using this methodology, states may not set prices lower than the forward-looking incremental costs directly attributable to provision of a given element. They may set prices to permit recovery of a reasonable share of forward-looking joint and common costs of network elements.[1491] In the aftermath of the arbitrations and relying on the state experience, we will continue to review this costing methodology, and issue additional guidance as necessary.

621. We reject various arguments raised by parties regarding the recovery of costs other than forward-looking economic costs in section 251(c)(2) and (c)(3) prices, including the possible recovery of: (1) embedded or accounting costs in excess of economic costs; (2) incumbent LECs' opportunity costs; (3) universal service subsidies; and (4) access charges. As discussed in Section VII.B.2.a. below, certain portions of access charges may continue to be collected for an interim period in addition to section 251(c)(3) prices.

622. With respect to prices developed under the forward-looking, cost-based pricing methodology, we conclude that incumbent LECs' rates for interconnection and unbundled elements must recover costs in a manner that reflects the way they are incurred. We adopt certain rules that states must follow in setting rates in arbitrations. These rules are designed to ensure the efficient cost-based rates required by the 1996 Act.

623. In the next section of the Order, we establish default proxies that states may elect to use prior to utilizing an economic study and developing prices using the cost-based pricing methodology. We recognize that certain states may find it difficult to apply an

[1491] We define these and other forward-looking cost concepts *infra*, Section VII.B.2.a. We define what we consider to be a reasonable share of forward-looking joint and common costs *infra*, Section VII.B.2.a.

economic costing methodology within the statutory time frame for arbitrating interconnection disputes. We therefore set forth default proxies that will be relatively easy to apply on an interim basis to interconnection arrangements. We discuss with respect to particular unbundled elements the reasonable rate structure for those elements and the particular default proxies we are establishing for use pending our adoption of a generic forward-looking cost model. Finally, we discuss the following additional matters: generic forward-looking costing models that we intend to examine further by the first quarter of 1997 in order to determine whether any of those models, with modifications, could serve as better default proxies; the future adjustment of rates; the relationship of unbundled element prices to retail prices; and the meaning of the statutory prohibition against discrimination in sections 251 and 252.

624. Those states that have already established methodologies for setting interconnection and unbundled rates must review those methodologies against the rules we are adopting in this Order. To the extent a state's methodology is consistent with the approach we set forth herein, the state may apply that methodology in any section 252 arbitration. However, if a state's methodology is not consistent with the rules we adopt today, the state must modify its approach. We invite any state uncertain about whether its approach complies with this Order to seek a declaratory ruling from the Commission.

B. Cost-Based Pricing Methodology

625. As discussed more fully in Section II.D. above, although the states have the crucial role of setting specific rates in arbitrations, the Commission must establish a set of national pricing principles in order to implement Congress's national policy framework. For the reasons set forth in the preceding section and as more fully explained below, we are adopting a cost-based methodology for states to follow in setting interconnection and unbundled element rates. In setting forth the cost-based pricing methodology for interconnection and access to unbundled elements, there are three basic sets of questions that must be addressed. First, does the 1996 Act require that the same standard apply to the pricing of interconnection provided pursuant to section 251(c)(2), and unbundled elements provided pursuant to section 251(c)(3)? Second, what is the appropriate methodology for establishing the price levels for interconnection and for each unbundled element, how should costs be defined, and is the price based on economic costs, embedded costs, or other costs? Third, what are the appropriate rate structures to be used to set prices designed to recover costs, including a reasonable profit? We address each of these questions in the following sections.

1. Application of the Statutory Pricing Standard

a. Background

626. In the NPRM, we proposed that any pricing principles we adopt should be the same for interconnection and unbundled network elements because sections 251(c)(2) and (c)(3) and 252(d)(1) use the same pricing standard.[1492] We invited parties to comment on this issue and to justify any proposed distinction in the pricing for interconnection and unbundled network elements. We also stated our belief that the same pricing rules that apply to interconnection and unbundled network elements should also apply to collocation under section 251(c)(6) of the 1996 Act.

b. Comments

627. Commenters generally agree that any pricing rules adopted by the Commission for interconnection and unbundled elements should be the same.[1493] These parties assert that any pricing rules the Commission ultimately adopts should not, therefore, create incentives to substitute or arbitrage one type of classification for another. Commenters also generally agree that the pricing rules the Commission adopts for interconnection and unbundled elements should also apply to collocation.[1494] Many of these parties agree that collocation is a subset of the interconnection arrangements contemplated by sections 251(c)(2) and 252(d)(1).[1495] On the other hand, a few parties contend that the pricing standards contained in section 252(d)(1) for interconnection and unbundled elements do not apply to collocation provided under section 251(c)(6).[1496] BellSouth argues that the Commission should not adopt any national standards for virtual collocation.[1497] Other commenters, including some that oppose the establishment of

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[1492] NPRM at para. 122.

[1493] *See, e.g.*, Citizens Utilities comments at 16 n.14; Ohio Commission comments at 42; Teleport comments at 46.

[1494] *E.g.*, ACSI comments at 16; ALTS comments at 34-35; Citizens Utilities comments at 16 n.14; Colorado Commission comments at 34; MCI comments at 54, 61; MFS comments at 30; NEXTLINK comments at 26; PacTel comments at 63; Sprint comments at 42; Teleport comments at 46.

[1495] *See, e.g.*, Citizens Utilities comments at 16 n.14; Colorado Commission comments at 34; MFS comments at 30; NEXTLINK comments at 26.

[1496] *See, e.g.*, SNET comments at 24 n.44.

[1497] BellSouth comments at 23.

pricing rules by the Commission, argue that, to the extent that the Commission adopts national standards for collocation, they should generally follow those established in the Commission's *Expanded Interconnection* proceeding in CC Docket No. 91-141.[1498]

c. Discussion

628. Sections 251(c)(2) and (c)(3) impose an identical duty on incumbent LECs to provide interconnection and access to network elements "on rates, terms, and conditions that are just, reasonable, and nondiscriminatory."[1499] In addition, both interconnection and unbundled network elements are made subject to the same pricing standard in section 252(d)(1). Based on the plain language of sections 251(c)(2), (c)(3), and section 252(d)(1), we conclude that Congress intended to apply the same pricing rules to interconnection and unbundled network elements. The pricing rules we adopt shall, therefore, apply to both.

629. We further conclude that, because section 251(c)(6) requires that incumbent LECs provide physical collocation on "rates, terms, and conditions that are just, reasonable, and nondiscriminatory," which is identical to the standard for interconnection and unbundled elements in sections 251(c)(2) and (c)(3), collocation should be subject to the same pricing rules.[1500] We also note that, because collocation is a method of obtaining interconnection and access to unbundled network elements, collocation is properly treated under the same pricing rules. This legal conclusion that there should be a single set of pricing rules for interconnection, unbundled network elements, and collocation provides greater consistency and guidance to the industry, regulators, and the courts. Moreover, it reduces the regulatory burdens on state commissions of developing and applying different pricing rules for collocation, interconnection, and unbundled network elements. We note that our adoption of this single set of pricing rules should minimize regulatory burdens, conflicts, and uncertainties associated with multiple, and possibly inconsistent rules, thus facilitating competition on a reasonable and efficient basis minimizing the economic impact of our rules for all parties, including small entities and small incumbent LECs.[1501]

[1498] *See, e.g.*, Bell Atlantic comments at 32-34.

[1499] 47 U.S.C. § 251(c)(2), (c)(3).

[1500] *See supra*, Section VI.B.

[1501] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

2. Rate Levels

a. Pricing Based on Economic Cost

(1) Background

630. We observed in the NPRM that economists generally agree that prices based on forward-looking long-run incremental costs (LRIC) give appropriate signals to producers and consumers and ensure efficient entry and utilization of the telecommunications infrastructure.[1502] We noted, however, that there was a lack of general agreement on the specifics of methodology for deriving prices based on LRIC or total service long-run incremental cost (TSLRIC). We invited parties to comment on whether we should require the states to employ a LRIC-based pricing methodology and to explain with specificity the costing methodology they support.[1503] We recognized, however, that prices based on LRIC might not permit recovery of forward-looking costs if there were significant forward-looking joint and common costs among network elements.[1504] We sought comment on how, if rates are set above incremental cost, to deal with the problems inherent in allocating common costs and any other overheads.[1505] We observed that, by defining the unbundled elements at a sufficiently aggregated level, it may be possible to reduce the costs to be allocated as joint and common by identifying a substantial portion of costs as incremental to a particular element. To the extent that joint and common costs cannot be entirely eliminated, we sought comment on various methodologies for assigning them, including the use of a fixed allocator or on the basis of inverse demand elasticity. We also sought comment on whether, regardless of the method of allocating common costs, we should limit rates to levels that do not exceed stand-alone costs.[1506] Finally, we invited parties to comment on whether a LRIC-based methodology would establish a price for interconnection and unbundled network elements that includes a reasonable profit and thus complies with section 252(d)(1).[1507]

631. A number of states already employ, or have plans to utilize, some form of LRIC

[1502] NPRM at para. 124.

[1503] *Id.* at para. 126.

[1504] *Id.* at para. 129.

[1505] *Id.* at para. 130.

[1506] *Id.* For a definition of stand-alone costs, *see* Section VII.B.2.a. *infra*.

[1507] 47 U.S.C. § 252(d)(1)(A)(i); NPRM at para. 129.

or TSLRIC methodology in their approach to setting prices for unbundled network elements,[1508] with several states choosing LRIC or TSLRIC as a price floor.[1509] For instance, the Connecticut Commission adopted a TSLRIC methodology to measure the cost of service of SNET, its principal incumbent LEC.[1510] Arizona also requires incumbent LECs to conduct TSLRIC cost studies to establish the underlying cost of unbundled services and facilities.[1511] The Ohio Commission has adopted Long Run Service Incremental Cost ("LRSIC"), which is closely related to TSLRIC.[1512] The Missouri and Wyoming Commissions are among a number of state commissions that have not yet adopted a pricing methodology, but are considering LRIC or TSLRIC.[1513] Oklahoma law provides for submission of LRIC cost studies and studies identifying a contribution to common costs for interconnection of facilities and access to network elements to the Oklahoma Commission during an arbitration.[1514] A number of

[1508] *See, e.g.*, California Commission comments at 29 (California has adopted TSLRIC as the standard for developing the costs of unbundled elements and in a rulemaking this summer will determine the unbundled network elements and what level of shared and common costs should be included in the price of each); Michigan Commission comments at 13 (1996 prices for loops to remain at levels established by the Michigan Commission in its original interconnection order or at TSLRIC); Texas Commission comments at 22 (Texas Commission has employed LRIC-based pricing methodologies for many years; SWBT and GTE required to file LRIC cost studies to be used in pricing not later than November 1, 1996).

[1509] *See, e.g.*, Colorado Commission comments at Attachment (Rules Prescribing Principles for Costing and Pricing of Regulated Services of Telecommunications Service Providers) 4 CCR 723-30, Rules 4-5; Hawaii Administrative Rules, Sections 6-80-32-34 (setting out a three-tiered pricing regime with TSLRIC set as floor for pricing of competitive services); Louisiana Commission comments at Attachment (Louisiana Public Service Commission "Regulations for Competition in the Local Telecommunications Market"), p.30; Washington Commission comments at 25, Appendix B (*Washington Utilities and Transportation Commission v. U S West Communications*, Docket No. UT-950200 at 82 (Washington Commission, April 11, 1996)); Wisconsin Stat. Ann. section 196.204 (requiring the price of each network service or function to exceed TSLRIC).

[1510] Connecticut Commission comments at 4.

[1511] Arizona Commission comments, Exhibit V (Arizona Administrative Code R14-2-1101 *et seq.*), p.10.

[1512] *See* Ohio Commission comments at 43-45.

[1513] *See, e.g.*, Missouri Commission comments at 11 (supports LRIC for costing; LRIC is defined in pending state legislation); Wyoming Commission comments at 26-27 (draft rules propose use of TSLRIC as a price floor, with prices to include a contribution to shared, common, and joint costs, and the sum of prices for unbundled elements not to exceed retail for bundled services; incumbent LECs shall impute the prices of unbundled elements into the price floors of each of their own services that utilize the network elements).

[1514] Oklahoma Commission comments at Appendix A (Corporation Commission Telephone Rules OAC 165:55-17-25), pp.10-11.

states have yet to choose a pricing methodology. For instance, the New York Commission sets prices on a case-by-case basis.[1515] Unbundled element prices also exist in several states pursuant to negotiated interconnection agreements that have either already been approved by state commissions or are under consideration.[1516]

632. Section 252(d)(1) requires, *inter alia*, that rates for interconnection and unbundled network elements be based on "cost (determined without reference to a rate-of-return or other rate-based proceeding)."[1517] We tentatively concluded in the NPRM that this language precludes states from setting rates by use of traditional cost-of service regulation, with its detailed examination of historical carrier investment and expenses.[1518] Instead, we indicated our belief that the statute contemplates the use of other forms of cost-based price regulation, such as the setting of prices based on forward-looking economic cost methodologies (such as LRIC) that do not involve the use of an embedded rate base. We sought comment on whether section 252(d)(1) forecloses consideration of historical or embedded costs or merely prohibits state commissions from conducting a traditional rate-of-return proceeding to establish prices for interconnection and unbundled network elements. Embedded costs are the costs that the incumbent LECs carry on their accounting books that reflect historical purchase prices, regulatory depreciation rates, system configurations, and operating procedures. We invited parties to comment on whether incumbent LECs should be permitted to recover some portion of their historical or embedded costs over TSLRIC.[1519]

633. In the NPRM, we noted that certain incumbent LECs had advocated that interconnection and access to unbundled element prices be based on the "efficient component

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[1515] *Competition, The State Experience* at 80 (compilation of written responses by state commission staffs to questions by FCC staff, compiled by NARUC) (March 8, 1996).

[1516] According to information in our possession, such agreements have been negotiated in, among other states, Alabama, Florida, Georgia, Kentucky, Illinois, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. Letter from W.W. Jordan, Executive Director -- Federal Regulatory, BellSouth, to William F. Caton, Acting Secretary, July 11, 1996 at Attachment (containing chart detailing agreements between BellSouth and new entrants in Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee); "Interconnection Agreement Under Sections 251 and 252 of the telecommunications Act of 1996, by and between, Ameritech Information Industry Services and MFS Intelenet of Illinois, Inc.," dated May 17, 1996 (filed July 25, 1996).

[1517] 47 U.S.C. § 252(d)(1)(B).

[1518] NPRM at para. 123.

[1519] *Id.* at para. 129.

pricing rule" (ECPR).[1520] Under this approach, an incumbent LEC that sells an essential input element, such as interconnection, to a competing network would set the price of that input element equal to "the input's direct per-unit incremental costs plus the opportunity cost to the input supplier of the sale of a unit of input."[1521] We tentatively concluded in the NPRM that ECPR or equivalent methodologies are inconsistent with the section 252(d)(1) requirement that rates be based on "cost," and we proposed to preclude the states from using this methodology.[1522]

634. Section 254 requires the Commission and the Joint Board established thereunder to ensure that "[a]ll providers of telecommunications service . . . make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service . . . ." That section further provides that "[t]here should be specific, predictable, and sufficient Federal and State mechanisms to preserve and advance universal service."[1523] The Conference Committee also explained that these provisions require any such universal service support payment to be, to the extent possible, "explicit, rather than implicit as many support mechanisms are today."[1524] In the NPRM, we sought comment on whether "it would be consistent with sections 251(d)(1) and 254 for states to include any universal service costs or subsidies in the rates they set for interconnection, collocation, and unbundled network elements."[1525] In particular, we discussed the "play or pay" system adopted by the state of New York in which interconnectors that agree to serve all customers in their self-defined service areas ("players") potentially pay a substantially lower interconnection rate than those that serve only selected customers ("payers") and are, therefore, liable to pay additional contribution charges.[1526] We noted that the statutory schedule for the completion of the

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[1520] *Id.* at para. 147. *See* William J. Baumol, *Some Subtle Issues in Railroad Deregulation*, 10 Int'l J. Trans. Econ. 341 (1983); William Baumol & Gregory Sidak, *Toward Competition in Local Telephony* (1994); William Baumol & Gregory Sidak, *The Pricing of Inputs Sold to Competitors*, 11 Yale J. on Reg. 171 (1994).

[1521] William Baumol & Gregory Sidak, *The Price of Inputs Sold to Competitors*, 11 Yale J. on Reg. 171, 178.

[1522] NPRM at para. 148.

[1523] 47 U.S.C. § 254(b)(4) and (b)(5).

[1524] Joint Explanatory Statement at 130-31. "In keeping with the conferees' intent that universal service support should be clearly identified, [section 254(e)] states that such support should be made explicit." *Id.* at 131; *see also* 47 U.S.C. § 254(e).

[1525] NPRM at para. 145.

[1526] *Id.*

universal service reform proceeding (15 months from the enactment of the 1996 Act) is different from that for this proceeding (6 months from the date of enactment of the 1996 Act). We asked whether the ability of states to take universal service support into account differs pending completion of the section 254 Joint Board proceeding or state universal service proceedings, pursuant to section 254(f), during any transition period that may be established in the section 254 proceeding or thereafter.[1527]

(2) Comments

635. *Forward-Looking Costs.* Most new entrants and IXCs agree that prices for interconnection and unbundled elements should be based on forward-looking, economic costs.[1528] Many state commissions also argue that, if federal pricing rules are adopted, forward-looking methodologies should serve as the basis for establishing rates in a competitive environment.[1529] The Department of Justice contends that pricing above forward-looking economic costs would subject competitors to substantial risk of a price squeeze because the real cost of a network element for the incumbent LEC will be its forward-looking economic cost, while the cost to the new entrant will be the higher price charged for the element by the LEC.[1530] Parties favoring a forward-looking, incremental cost methodology argue that it is the appropriate pricing standard for several reasons. First, such an approach simulates the prices for network elements that would result if there were a competitive market for the provision of such elements to other carriers.[1531] In such a market, these parties argue, competition would drive prices to forward-looking costs, even if such costs were lower than a firm's historical costs.[1532] Second, unbundled element prices based on forward-looking economic costs prevent incumbent LECs from exploiting their market power at the expense of

[1527] *Id.*

[1528] *See, e.g.*, ACSI comments at 54-55; AT&T comments at 47; Jones Intercable comments at 25-26; LDDS comments at 60; MCI comments at 59, 61; NEXTLINK comments at 27; Sprint comments at 43-44; Teleport comments at 46; Telecommunications Resellers Ass'n comments 38-39; *see also* Ad Hoc Telecommunications Users Committee comments at 31-34; DoJ comments at 27-32; Frontier comments at 21-22; Texas Public Utility Counsel comments at 33-34; Attorneys General reply at 3; NCTA reply at 18-20; NTIA reply at 17-18 n.35.

[1529] *See, e.g.*, New York Commission comments at 3-4; Missouri Commission comments at 11; Kentucky Commission comments at 4-5; Wyoming Commission comments at 27-28; Ohio Commission comments at 41-43.

[1530] DoJ comments at 28-31.

[1531] *See, e.g.*, DoJ comments at 28-29.

[1532] *See, e.g.*, AT&T comments at Appendix C (Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig), p.5; DoJ comments at 28-29.

their competitors that are dependent on the incumbent LEC's facilities.[1533] Third, a forward-looking incremental cost methodology creates the right investment incentives for competitive facilities-based entry and creates incentives for the market to move towards competition while preserving opportunities for competition even if some network elements prove to be resistant to competition.[1534] Fourth, a pricing methodology based on forward-looking economic costs minimizes the incumbent LECs' opportunities to engage in anticompetitive cross-subsidization that could delay the emergence of effective competition.[1535] Finally, these parties argue that pricing based on forward-looking economic costs will lead to lower prices for consumers.[1536]

636. While many commenters agree that the proper economic cost standard for interconnection and unbundled elements is one based on forward-looking LRIC, the record indicates a lack of consensus on the precise definition of such a methodology. While many parties, including some incumbent LECs, favor a pricing methodology based on TSLRIC,[1537] others contend that LRIC provides the appropriate basis for pricing interconnection and unbundled elements.[1538] AT&T argues that, because incumbent LECs will be providing access to unbundled network elements and interconnection, and not merely the individual services that use those elements, the relevant question is the incumbent LEC's cost of producing the

[1533] *See, e.g.*, DoJ comments at 30.

[1534] *See, e.g.*, AT&T comments at Appendix C (Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig), p.7; DoJ comments at 29; NCTA comments at Appendix B (Unbundling, Interconnection, and Traffic Exchange: The Pricing of Access to Local Exchange Networks), p. 22.

[1535] *See, e.g.*, DoJ comments at 30-31.

[1536] *See, e.g.*, DoJ comments at 28-31.

[1537] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 34-36; AT&T comments at 47-48; ALTS comments at 35-36; Ameritech comments at 63-64 (but must include recovery of joint, common, and residual costs); CFA/CU comments at 26-32 (including a contribution to joint and common costs); Citizens Utilities comments at 18; Comcast comments at 23; CompTel comments at 67-71; Competition Policy Institute comments at 8; DoJ comments at 28-31 (including any joint and common costs); Frontier comments at 21-22; Intermedia comments at 14; LDDS comments at 56, 62; MCI comments at 60-61; NCTA comments at 49-50; Ohio Consumers' Counsel comments at 24-25 (including a markup over TSLRIC to reflect a reasonable allocation of joint and common costs); SNET reply at 5-7 (including a reasonable contribution to common costs); Sprint comments at 44 (plus a reasonable contribution to joint and common costs), reply at 28-32; TCC comments at 14.

[1538] *See, e.g.*, Texas Statewide Tel. Cooperative comments at 8-11, 14.

entire demand for network elements.[1539] Because TSLRIC defines a cost increment relative to a hypothetical situation in which the supplier does not currently provide the network element at all and thus must construct and operate all element-specific facilities necessary to produce the network element, AT&T believes that TSLRIC, unlike LRIC, includes all element-specific fixed costs.[1540]

637. The Consumer Federation of America argues that costs must be analyzed consistently across all major services using the same cost methodology, *i.e.*, individual functionalities or specific capacities must have similar costs across services.[1541] AT&T argues that TSLRIC should exclude all costs attributable to the incumbent LECs' retailing operations, and that all other cost allocations should be competitively-neutral and assigned on an equally proportional basis relative to attributable costs.[1542] ALTS argues that the underlying data from a TSLRIC study should be accessible for purposes of replicating the study methods and comparisons to other public data.[1543] NTIA contends that the Commission should require the states to consider recovery of only those costs that the incumbent can convincingly demonstrate are incurred in service provisioning.[1544] Supporters of a forward-looking economic cost methodology argue that TSLRIC studies can be prepared quickly to establish interconnection and unbundled element prices.[1545]

638. Incumbent LECs generally oppose the adoption of a forward-looking, long-run incremental costing methodology.[1546] At least five major reasons are offered in opposition. First, opponents of a forward-looking, long-run incremental costing methodology argue that setting the price of each discrete service based on LRIC will not recover the total costs of the

[1539] AT&T comments at 47, Appendix C (Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig), pp.6.

[1540] *Id.* at 48.

[1541] CFA/CU comments at 32.

[1542] AT&T comments at 61-62, 64-65.

[1543] ALTS comments at 36-37.

[1544] NTIA reply at 28.

[1545] *See, e.g.*, LDDS comments at 64-65.

[1546] *See, e.g.*, Matanuska comments at 3-4; NYNEX comments at 46-47; PacTel comments at 66-67; TCA comments at 8.

network because if prices are set equal to the cost of the last unit, total revenues will fall short of total costs.[1547] Second, PacTel argues that a forward-looking cost methodology also suffers from the "fallacy of perfect competition" because it does not account for the fact that, while it is true that competition drives the price of every product toward incremental cost, every multi-product firm must have some products priced far enough above incremental cost to recover its total costs and return a profit to investors.[1548] Third, incumbent LECs argue that setting prices based on the forward-looking economic cost of the element will not create incentives for new entrants to build their own facilities,[1549] and will discourage efficient entry and useful investment by both incumbent LECs and their competitors.[1550] Fourth, some opponents of a forward-looking, economic cost methodology contend that such an approach raises significant practical and administrative problems because LRIC studies are expensive to conduct, almost impossible to audit or review particularly for small entities seeking to enter the local exchange market, highly subjective, and the necessary data are under the exclusive control of the party subject to the agreement.[1551] USTA and other commenters also argue that use of LRIC cost studies would fail to capture differences in geographic regions, thereby denying small incumbent LECs a reasonable opportunity to recover their costs.[1552] Finally, many opponents of a forward-looking, economic cost approach to pricing interconnection and access to unbundled elements argue also that such a methodology precludes any contribution to joint and common costs and does not allow the recovery of historical costs.[1553] These parties contend that network providers must be permitted to recover their total costs of service, including a return on investment and a reasonable allocation of joint, common, and

[1547] *See, e.g.*, Bell Atlantic comments at Attachment 1 (Affidavit of Jerry A. Hausman), pp.3-4; NECA comments at 8; Rural Tel. Coalition comments at 25.

[1548] PacTel comments at 68-69; *see also* Rural Tel. Coalition reply at 26-27.

[1549] *See, e.g.*, Bell Atlantic comments at 38; SBC comments at 91-92.

[1550] *See, e.g.*, PacTel comments at 70; SBC comments at 90-92; *see also* U S West comments at Exhibit A (Federal Implementation of the Telecommunications Act of 1996: Competition in the Local Exchange), p.9.

[1551] *See, e.g.*, Bell Atlantic comments at Attachment 2 (Declaration of Robert W. Crandall), p.8; MFS comments at 54, reply at 11-12; NECA comments at 8.

[1552] *E.g.*, USTA comments at 45-50; Bay Springs reply at 8.

[1553] *See, e.g.*, BellSouth comments at 56-57; NYNEX comments at 50-52; PacTel comments at 65-66; SBC comments at 88, reply at 24-25; U S West reply at 9, 12 (stating that depreciation expenses should be properly allocated); *see also* NECA comments at 8; TCA comments at 8-9. For a discussion of recovery of joint, common, and embedded costs, *see infra* Section VII.B.2.a.

historical costs.[1554]

639. Incumbent LECs generally contend that costs should be based on the individual incumbent LEC's existing network design and technology instead of the idealized least-cost, most efficient network design and technology.[1555] USTA argues that, if competitors want to use an incumbent LEC's embedded plant, competitors should pay for the existing plant, not some theoretical, more efficient plant.[1556] In addition, these parties argue that, if a new entrant can purchase the unbundled element from the incumbent LEC at a price no higher than the cost of the least-cost, most efficient provider, then the new entrant has little incentive to invest in its own facilities. Ameritech also contends that section 252(d)(1) addresses recovery of the incumbent LEC's costs of providing interconnection and unbundled network elements, not the costs of a hypothetical carrier.[1557]

640. On the other hand, several new entrants argue that a forward-looking economic cost methodology should be based on an efficient provider's costs of producing a service.[1558] These parties contend that, in a competitive market, prices are determined by the cost of efficient potential entrants, not the embedded costs of existing firms.[1559] In addition, a pricing standard based on the costs of the element using the most-efficient technology prevents incumbent LECs from charging competitors for the cost of facilities that would in fact be used in large part by the incumbent LECs themselves to compete in new markets such as

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[1554] *See, e.g.*, Ameritech comments at 60, reply at 30-33 (stating that residual cost recovery must also be permitted); Bell Atlantic comments at 35-36 (stating that the recovery of the total costs of constructing and operating the networks must also be permitted); NYNEX comments at 42-44; USTA comments at Attachment 1 (Affidavit of Jerry A. Hausman), pp.5-6.

[1555] *See, e.g.*, Ameritech reply at 32-33; Bell Atlantic reply at 17-18; Bellsouth reply at 36-37; *see also* GVNW comments at 36; USTA comments at 40, reply at 21-22.

[1556] USTA comments at 40.

[1557] Ameritech reply at 32.

[1558] *See, e.g.*, ACSI comments at 56; AT&T comments at 57-60 (optimally configured and sized assets with current technology and efficient operating practices); AT&T comments at Appendix C (Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig), p. 10 (efficient, cost-minimizing competitor); GST comments at 26-27 (costs of an efficient LEC rather than the actual costs of an incumbent LEC); Teleport reply at 30 (best available technology at today's prices); *see also* DoJ reply at 9-11 (best generally available technology); Louisiana Commission comments at 4, 15; Telecommunications Resellers Ass'n comments at 38 (most efficient available technology).

[1559] *See, e.g.*, TCC comments at 17.

interexchange service.[1560] Sprint, however, argues that prices should be based on the incumbent LEC's average utilization and existing network design and technology, not on an idealized network and technology that may bear no relationship to the incumbent LECs existing operations.[1561]

641. USTA, Bell Atlantic, and BellSouth have asserted in various filings and *ex parte* presentations that TSLRIC-based pricing would not properly compensate incumbent LECs for certain factors that affect capital costs and economic depreciation rates.[1562] First, when technological progress lowers equipment costs, the replacement or forward-looking economic cost of certain durable sunk investments can be expected to decline over time. In this case the correct measure of cost over any period of time should include the expected decline in economic value during that period.[1563]

642. Second, these parties argue that, when investments in facilities needed to meet a specific level of demand are sunk and irreversible, an incumbent LEC may not be able to recover these costs over the physical life of the facility, because demand may decrease as new entrants elect to build their own facilities. When entry is possible using current technology, either competition from these entrants, or rate regulation can prevent retail service prices from rising significantly, which will place an effective ceiling on profits. If demand for a service falls in a market in which the incumbent LEC is the only supplier and owner of sunk facilities, however, there will be no corresponding exit of other carriers that will prevent prices and profits from falling. Because of this asymmetric effect of changing market conditions on an incumbent LEC's profits, these parties claim that increasing the uncertainty due to entry in the local exchange market will increase the cost of capital to the incumbent LEC. They then assert that the inability of TSLRIC to account for the risks associated with sunk facilities can lead to understating the true economic cost of an element by a factor of

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[1560] DoJ reply at 10.

[1561] Sprint reply at 31-32.

[1562] USTA reply comments at Attachment 1 (Reply Affidavit of Jerry A. Hausman); Bell Atlantic comments at Attachment 1 (Affidavit of Jerry A. Hausman); Letter from Robert T. Blau, Vice President, Executive and Federal Regulatory Affairs, BellSouth, to William F. Caton, Acting Secretary, FCC, July 25, 1996, at Attachment (Response to Hubbard and Lehr).

[1563] We note that USTA seems to present a contradictory argument regarding the expected effect of this issue -- here Hausman claims that prices will decrease rapidly, whereas in our price cap proceeding, USTA sponsored testimony by Christenson that claimed input prices would generally increase at the rate of inflation. USTA comments in CC Docket No. 94-1, at 25-27.

three.[1564] Finally they assert that empirical research that shows firms' hurdle rates in excess of the market cost of capital shows that the considerations of risk associated with sunk investment significantly raises a firm's cost of capital.[1565]

643. *Joint and Common Costs.* Several incumbent LECs contend that a forward-looking, economic cost methodology does not take into account either joint or common costs.[1566] Although a few parties contend that incumbent LECs do not need a mark-up over TSLRIC to recover joint and common costs because incumbents are presumably already recovering these costs,[1567] commenters generally agree that incumbent LECs should be permitted to recover some measure of forward-looking joint and common costs.[1568] These commenters argue that pricing at incremental cost without joint and common costs is economically inefficient because it permits competitors to offer the incumbent LECs' services without making a contribution to the common costs that the LECs incur in offering the service.[1569] They further contend that excluding recovery of joint and common costs will distort technological decisions because the LEC is encouraged to invest in less efficient technologies that have higher incremental costs and lower common costs, which would tend to destroy economies of scope.[1570] Finally, incumbent LECs fear that they will be forced to increase retail rates to recover these unrecovered common costs, while their competitors that do not face such costs will reduce their own prices and have little incentive to invest in

[1564] *See* USTA reply at Attachment 1 (Reply Affidavit of Jerry A. Hausman), p.1.

[1565] *Id.* at 7.

[1566] *See, e.g.*, Bell Atlantic comments at Tab 2 (Declaration of Robert W. Crandall), p.9, reply at Attachment 1 (Declaration of Alfred E. Kahn and Timothy J. Tardiff), p.6; BellSouth comments at 51; Municipal Utilities comments at 19-21; SBC reply at 24-25; TDS comments at 18-19.

[1567] *See* Telecommunications Resellers Ass'n comments at 39-40; Texas Public Utility Counsel comments at 19-20; WinStar comments at 29, reply at 9-10.

[1568] *See, e.g.*, Ameritech comments at 60; Bell Atlantic comments at 36; Citizens Utilities comments at 19; Cincinnati Bell comments at 24-25; Colorado Commission comments 45-46; DoJ reply at 6; GTE Comments at 61-62; Kentucky Commission comments at 5; Lincoln Tel. comments at 13; Mass. Commission comments at 11-12; NCTA comments at 49-50; Ohio Consumers' Counsel comments at 24; SBC comments at 91; Sprint comments at 43-44; AT&T reply at 28; NTIA reply at 19-21; USTA reply at 19.

[1569] *E.g.*, BellSouth comments at 52-53; GTE comments at Attachment 3 (Affidavit of Edward C. Beauvais, Ph.D.), p.3.

[1570] *See, e.g.*, BellSouth comments at 53; Lincoln Tel. comments at 13.

facilities of their own.[1571]

644. There is no consensus in the record on the magnitude of the joint and common costs at stake. Although commenters argued that the amount of common costs varies dramatically due to differences in location, network construction, and equipment,[1572] several parties are skeptical that there are significant joint and common costs between network elements given the relative modularity of the network and associated functions.[1573] These parties contend that, if joint and common costs are incurred, incumbent LECs must quantify them so that a state commission can determine whether and precisely how much contribution is needed.[1574] The Department of Justice asserts that, when developing a TSLRIC for unbundled network elements, it is preferable, where possible, to focus on costs of facilities and network elements rather than services that use those facilities in order to arrive at a more accurate determination of economic costs and to reduce the amount of costs that must be treated as joint or common.[1575] The incumbent LECs disagree with the new entrants' characterization of these costs as *de minimis* and argue that there is no evidence that unrecovered joint and common costs are much lower in the TSLRIC rates for physical elements than a TSLRIC standard based on the cost of providing services.[1576]

645. There is considerable disagreement in the record over the appropriate method of allocating joint and common costs under a TSLRIC approach. AT&T contends that the vast majority of the relevant costs will be causally attributed to particular network elements in the calculation of TSLRIC, and that we should prescribe rigid allocators that limit the incumbents' ability to manipulate prices by imposing high markups on new entrants.[1577] This approach, it is argued, is more competitively neutral than Ramsey pricing, which allocates

[1571] *E.g.*, BellSouth comments at 53-54.

[1572] *See, e.g.*, Municipal Utilities comments at 19-20; NARUC reply at 9.

[1573] *See, e.g.*, AT&T comments at Attachment or Appendix C (Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig), pp.13-14; Competition Policy Institute comments at 19; DJ comments at 31-32, reply at 8; Texas Public Utility Counsel comments at 24-25.

[1574] Texas Public Utility Counsel comments at 17-28; Sprint comments at 47-50.

[1575] DoJ reply at 8; *see also* Competition Policy Institute comments at 19.

[1576] *E.g.*, PacTel reply at 27; *see also* Cincinnati Bell reply at 10.

[1577] *See* AT&T comments at 61-62.

costs based on inverse demand elasticity.[1578] In contrast, incumbent LECs advocate allocation of joint and common costs based on inverse demand elasticity,[1579] *i.e.*, according to Ramsey pricing principles.[1580] New entrants and other parties oppose the use of Ramsey pricing for interconnection and unbundled network elements for use in a market that is moving toward competition over the long-run.[1581] They contend that Ramsey pricing enables LECs to shift costs associated with entry into new competitive markets over to captive services.[1582] One state commission responds that the Commission's concern in this regard would be addressed by calculating demand elasticities on the basis of the total industry demand for the service, which would negate the influence of competition on demand elasticities.[1583]

646. Commenters suggested other means of allocating joint and common costs. For example, certain incumbent LECs argue that these costs must not be shifted from interconnection and unbundled elements to residential subscribers,[1584] while certain new entrants suggest that these costs should be recovered at the retail level.[1585] Many new entrants agree that the Commission should require allocation of joint and common costs that minimizes the opportunity for incumbent LECs to harm competitors through strategic pricing.[1586] For example, some new entrants argue that states should be required to minimize allocation of

[1578] *See, e.g.*, Teleport comments at 47-48.

[1579] *See e.g.*, GTE comments at 63, comments at Attachment 3 (Affidavit of Edward C. Beauvais, Ph.D.), pp.4-6; *see also* Mass. Commission comments at 11-12.

[1580] *See* Frank P. Ramsey, *A Contribution to the Theory of Taxation*, 37 Econ. J. 47 (1927); *see generally* Kenneth E. Train, *Optimal Regulation: The Economic Theory of Natural Monopoly* 115-40 (1992) (discussing efficiency properties of Ramsey prices); Bridger M. Mitchell & Ingo Vogelsang, *Telecommunications Pricing: Theory and Practice* 43-61 (1991).

[1581] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 39-41; CompTel comments at 79-80; MECA comments at 45; Teleport comments at 47-48; Texas Public Utility Counsel comments at 27; WinStar reply at 10-11.

[1582] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 38-39.

[1583] *See, e.g.*, Mass. Commission comments at 12.

[1584] *See, e.g.*, Puerto Rico Tel. comments at 10; Rural Tel. Coalition comments at 27.

[1585] *E.g.*, MCI reply at 9-10.

[1586] *See, e.g.*, MCI reply at 9-10.

joint and common costs to bottleneck or essential network elements.[1587] MCI and Sprint assert that such costs should be spread across all services provided by a carrier in proportion to the TSLRIC for each service.[1588] A few commenters assert that the Commission should adopt a fixed mark-up over TSLRIC for allocation of joint and common costs.[1589] Cable & Wireless supports the adoption of a rule that allocates common costs uniformly for all services offered. It argues that a disproportionate allocation system, that for example, assigns common costs strictly to retail services purchased for resale by small companies, but not to unbundled network elements utilized by larger competitors, would prove detrimental to the development of local competition.[1590] Finally, certain parties suggested that regardless of the method ultimately used to allocate joint and common costs, TSLRIC should serve as the floor[1591] and prices should not exceed stand-alone costs.[1592]

647. *Reasonable Profit.* Commenters disagree over what should constitute a "reasonable profit." Numerous commenters argue that a TSLRIC-based methodology for the pricing of interconnection and unbundled network elements includes a reasonable profit and is, therefore, consistent with the 1996 Act.[1593] These commenters argue that economic

[1587] *See, e.g.*, LCI comments at 4-5 (even under a TSLRIC methodology, it may be necessary to allocate joint direct costs among classes of service); Time Warner comments at 52-53 (only elements that can be duplicated by competitors or that are already available from other sources should include a reasonable markup over TSLRIC for shared and common costs); *see also* CFA/CU comments at 33-35 (allocation to such elements should be no more than the allocation of such costs to basic service).

[1588] *See* AT&T comments at 64; MCI reply at 9-10; Sprint comments at 47.

[1589] *See, e.g.*, Competition Policy Institute comments at 19 (suggesting an overhead loading of six percent); *see also* Sprint comments at 48-49 (joint and common costs should be no more than 15 percent of TSLRIC).

[1590] Cable & Wireless comments at 35.

[1591] *See, e.g.*, Citizens Utilities comments at 19; Florida Commission comments at 26; SBC comments at 93-94.

[1592] *See, e.g.*, AT&T comments at Appendix C (Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig), pp.14-15; TDS comments at 21.

[1593] *See, e.g.*, CompTel comments at 69-70; LDDS comments at 61; MCI comments at 61-62; Texas Public Utility Counsel comments at 19-20; WinStar comments at 29; Ad Hoc Telecommunications Users' Committee reply at Appendix A (Interconnection Pricing Standards for Monopoly Rate Elements in a Potentially Competitive Local Telecommunications Market), p.12.

measures, such as TSLRIC, reflect a reasonable profit by including the cost of capital.[1594] Time Warner and NEXTLINK contend that permitting incumbent LECs to receive a profit above that contained within TSLRIC pricing would provide them with a greater return on facilities than was permitted under rate-of-return regulation by "double-counting" the profit.[1595] Furthermore, NEXTLINK rejects the notion that profit includes the recovery of embedded costs or is a means of recovering subsidies for universal service currently recovered through access charges such as the transport interconnection charge or carrier common line charge, or their intrastate equivalents.[1596] Similarly, LDDS believes that "reasonable profit" cannot be read to include contribution to costs having nothing to do with providing the network elements or interconnection that are the subject of a section 252 pricing standard.[1597]

648. Incumbent LECs, however, contend that setting rates on a TSLRIC-based methodology alone would violate section 252(d)(1) by precluding recovery of a reasonable profit.[1598] NYNEX and USTA state that profit is what a firm makes after it recovers its total costs of providing all of its services, including its investment-related costs.[1599] Ameritech similarly contends that the term "reasonable profit" means the ability to earn positive economic profits as an incentive for efficiency and innovation.[1600] PacTel argues that, in order to allow for a reasonable profit, rates for interconnection and unbundled elements must permit full recovery of historical accounting costs. PacTel charges that the federal courts have held that the determination of a "reasonable profit" should consider the effect on the carrier's whole enterprise and, therefore, the sum of the carrier's rates must enable it to

[1594] *E.g.*, AT&T reply at 31; CompTel comments at 69-70, reply at 39; DoJ reply at 9; Frontier reply at 12-15; MCI comments at 61-62; Texas Public Utility Counsel comments at 19-20; WinStar comments at 29.

[1595] NEXTLINK comments at 28; Time Warner reply at 31-32.

[1596] NEXTLINK comments at 28-29.

[1597] LDDS comments at 61.

[1598] *See, e.g.*, GTE comments at 60; NYNEX comments at 51-52; PacTel comments at 69; SBC comments at 88; TCA comments at 9; TDS comments at 18; *see also* GTE comments at Attachment 3 (Affidavit of Edward C. Beauvais, Ph.D.), p.9.

[1599] *See* NYNEX comments at 42; USTA comments at 43.

[1600] *See* Ameritech comments at 70-71.

recover its total historical costs.[1601]

649. Several parties contend that the issue of what constitutes a reasonable profit should be left to the states. Citizens Utilities contends that the issue of whether profit is reasonable is a question of fact to be resolved, where necessary, in arbitration proceedings.[1602] Time Warner argues that what constitutes reasonable profit should, as a matter of policy, vary depending on the nature of the facilities or services being provided and should, therefore, be left to the states.[1603] The Illinois Commission argues that states may even use rate-of-return methodologies for the determination of reasonable profit.[1604]

650. There is also disagreement among the commenters regarding the force of the reasonable profit language in section 252. While many incumbent LECs interpret Section 252(d)(1) as *requiring* prices to include a reasonable profit,[1605] certain new entrants and other parties argue that the reasonable profit language is permissive, not mandatory.[1606] For example, several LECs contend that, to avoid confiscation of their property, LECs are entitled to full operating expenses as well as the capital costs of doing business and a reasonable profit.[1607] The Ohio Consumers' Counsel, however, argues that the language of section 252(d)(1) indicates that it is at the discretion of the state commissions to determine whether to allow rates to reflect a reasonable profit.[1608]

651. USTA contends that "purely forward-looking TSLRIC" should not be the price

[1601] *See* PacTel comments at 65-66, *citing FPC v. Hope Natural Gas*, 320 U.S. 591 (1944) and *Jersey Central Power & Light v. FERC*, 810 F.2d 1168, 1172 (D.C. Cir. 1987).

[1602] Citizens Utilities comments at 17.

[1603] Time Warner comments at 52.

[1604] Illinois Commission reply at 15.

[1605] *See, e.g.*, PacTel comments at 65-66.

[1606] *See, e.g.*, AT&T reply at 31; Cox reply at 29; DoJ reply at 15.

[1607] *See, e.g.*, MECA comments at 44, 49; PacTel comments at 65-67.

[1608] Ohio Consumers' Counsel comments at 26.

for interconnection elements because "telecommunications networks are mostly sunk costs."[1609] It argues that, when investment in facilities requires sunk and irreversible costs, a firm may not be able to recover this investment over the physical life of the facilities due to the risks of decreases in value resulting from future competition. USTA contends that allowing other carriers into the provision of local exchange service will subject incumbent LECs to these types of risks. It then claims that TSLRIC calculations do not appropriately account for these additional risks.

652. USTA also argues that the risks to which the incumbent LECs will be subject as a result of competition in the local exchange market include the risks from facing new competition, technological change, change in demand, and interest rates. It further argues that these risks will result in many situations in which the incumbent LECs may face a reduction in profits (downside risk) and no situations in which the incumbent LECs may see an increase in their profits. Thus, incumbent LECs must be compensated for these additional risks, according to USTA. It concludes that TSLRIC calculations fail to provide this compensation, stating "TSLRIC can be biased downward by a factor of three."[1610]

653. Similarly, Bell Atlantic asserts that, in a market where input prices are declining, a TSLRIC standard is not the appropriate standard because, "in a world of continual technological progress, it would be irrational for firms constantly to update their facilities in order completely to incorporate today's lowest-cost technology."[1611] Thus, it argues that because a carrier would not replace its entire existing set of facilities (a sunk investment) with the best available technology at a given point, the price of the best available technology understates the cost of providing service.[1612]

654. The Consumer Federation of America, disputing the incumbent LECs' claims regarding risk premiums, argues that risk premiums are reflected in the large returns incumbent LECs have already earned.[1613]

655. *Embedded Costs.* IXCs, competitive local entrants, and others interpret section

[1609] *See* USTA reply at Attachment 1 (Reply Affidavit of Professor Jerry A. Hausman), p.1.

[1610] *Id.* at 6. Presumably, by TSLRIC, Professor Hausman is referring to a TSLRIC assuming a risk free rate of return and a depreciation rate that encompasses the physical life of assets.

[1611] Bell Atlantic reply at Exhibit 1 (Declaration of Alfred E. Kahn and Timothy J. Tardiff), para.8a.

[1612] *Id.*

[1613] *See* CFA/CU comments at 61-63.

251(d)(1) as precluding states from setting rates by use of traditional cost-of-service regulation, with its detailed examination of historical accounting costs and reliance on an embedded rate base.[1614] These parties argue that some measure of forward-looking economic costs, not historical costs, should be the only basis for setting rates for interconnection and unbundled network elements because only forward-looking economic costs meet the statutory requirement in section 252(d)(1) that such rates be "determined without reference to a traditional rate-of-return or other rate-based proceeding." Potential new entrants and many other commenters argue that historical or embedded costs should not be included in the prices of interconnection and unbundled network elements.[1615] NTIA asserts that it is unwise to include in the prices for interconnection and unbundled elements an amount to recover historical costs when the size of any shortfall between historical costs and TSLRIC's forward-looking costs will not be determined for many years after interLATA entry.[1616] These parties contend that permitting incumbent LECs to recover embedded costs in the prices they charge competitors for interconnection and unbundled network elements, while the incumbents experience much lower incremental costs, will result in inefficiently high prices that will either cause new entrants to over-build existing systems instead of maximizing the efficient use of the existing incumbent LEC's network, or discourage entry and investment in the local markets altogether.[1617] Moreover, opponents of embedded cost recovery maintain that these costs reflect past inefficiencies and their recovery does not create any incentive for incumbent LECs to maximize their network and operational efficiencies.[1618] Commenters also argue that embedded cost recovery permits incumbents to engage in anticompetitive, strategic,

[1614] *See, e.g.*, AT&T comments at 47; LDDS comments at 60; MCI comments at 61-62; MFS comments at 59; Sprint comments at 43; Teleport comments at 46; Time Warner comments at 51; Frontier comments at 21; Excel comments at 9; ACSI comments at 54-55; WinStar comments at 37-38; GST comments at 29-30; *see also* Ad Hoc Telecommunications Users Committee comments at 30-31; DoJ comments at 27-32, reply at 14; Kentucky Commission comments at 4; Texas Public Utility Counsel comments at 33-34; Telecommunications Resellers Ass'n comments at 38; Michigan Commission comments at 14; Pennsylvania Commission comments at 29; Ohio Commission comments at 42-43; Attorneys General reply at 7-8.

[1615] *See, e.g.*, AT&T comments at 47; CFA/CU reply at 18-19; DoJ comments at 27-32; N. Economides comments at 3; Frontier comments at 21-22, reply at 13; Jones Intercable comments at 25-26; LDDS comments at 60; MCI comments at 61-62; MFS comments at 59; Michigan Commission comments at 14; Sprint comments at 43; Teleport comments at 46; TCC comments at 15-16; Texas Public Utility Counsel comments at 33-34; Time Warner comments at 51; WinStar comments at 37-38; *see also* Ad Hoc Telecommunications Users' Committee reply at Appendix A (Interconnection Pricing Standards for Monopoly Rate Elements in a Potentially Competitive Local Telecommunications Market), pp.2-6;

[1616] *See* NTIA reply at 28-29.

[1617] *See, e.g.*, Competition Policy Institute comments at 8; TCC comments at 15-16.

[1618] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 53-54.

or discriminatory pricing by manipulating the cost of individual rate elements.[1619]

656. In response to claims that the incumbent LECs are entitled to recover embedded costs incurred as a result of their regulation, opponents of embedded cost recovery argue that, at the state level, incumbent LECs have been opting for incentive-based regulation and so have foregone the right to claim entitlement to recovery of embedded costs in exchange for the flexibility to price their services to meet competition.[1620] AT&T argues that, because the majority of the incumbent LECs' embedded plant was installed after 1990, the forward-looking replacement costs of this old plant may in many cases be higher than the incumbent LECs' embedded costs.[1621] MCI disagrees with incumbent LECs' claims that excluding historical costs will discourage future investment by incumbent LECs and argues instead that incumbent LECs make investment decisions based upon expected future earnings.[1622]

657. Most incumbent LECs and some other parties dispute the claim that historical costs are precluded by the statute,[1623] asserting instead that section 252(d)(1) merely prohibits the use of a rate-of-return *proceeding* to determine such rates.[1624] Incumbent LECs argue that any pricing methodology the Commission adopts should permit recovery of historical or embedded costs in the prices of interconnection and unbundled network elements.[1625] NYNEX specifically proposes a cost-accounting pricing methodology that places the burden on the incumbent LEC to identify the specific accounting data that would be associated with the

[1619] TCC comments at 15-16

[1620] *See, e.g.*, GST comments at 29-30; WinStar comments at 38.

[1621] *See* AT&T reply at 33. For a detailed discussion, *see* AT&T reply at Appendix C (Affidavit of Lee Selwyn and Patricia Kravtin), pp.1-4.

[1622] *See* MCI reply at 15-16.

[1623] *See, e.g.*, Bell Atlantic comments at 37; BellSouth reply at 35-37; Colorado Commission comments at 34-35; GVNW comments at 35-36; Municipal Utilities comments at 19; NYNEX comments at 46-47; Ohio Consumers' Counsel comments at 23; PacTel comments at 65; Roseville Tel. comments at 6-8; Rural Tel. Coalition comments at 26-28; SBC comments at 88; TDS comments at 17-18; Texas Statewide Telephone Coop. Inc. comments at 7; USTA comments at 40.

[1624] *See, e.g.*, Bell Atlantic comments at 37; Municipal Utilities comments at 19; Ohio Consumers' Counsel comments at 23; Texas Statewide Telephone Coop. comments at 7.

[1625] *See, e.g.*, Alaska Tel. Ass'n comments at 4-5; Ameritech comments at 60; Bell Atlantic comments at 36; Cincinnati Bell comments at 30; Lincoln Tel. comments at 11-12; Roseville Tel. comments at 7-8; SBC comments at 59; SNET comments at 29; USTA comments at 40; *see also* NECA comments at 6, reply at 8-9.

particular type of interconnection requested by the competing carrier under section 251.[1626]

658. USTA cites reports that estimate that embedded costs that would not be recouped under a solely forward-looking pricing methodology are between $13 billion and $18.4 billion.[1627] Incumbent LECs contend that, because incumbent LECs must offset this shortfall of revenues against total costs that is created by a failure to recover embedded costs, they will be discouraged from investing to maintain and upgrade their networks in order to avoid the risk of again being unable to recover embedded costs.[1628] In addition, they argue that they incurred these embedded costs under federal and state regulatory oversight, which imposed on incumbent LECs social policy obligations and uneconomic costing practices, and that they therefore should be permitted to recover them.[1629] Incumbent LECs also assert that past investments were made under the belief that costs would be recovered, and that rates collected in the past did not reflect the risk that embedded costs might not be recovered in future rates.[1630] Several commenters argue that the opportunity to recover embedded costs through rates for interconnection and unbundled elements is particularly important for small and rural incumbent LECs.[1631] Finally, some parties also contend that, if they are not permitted to recover embedded costs, these costs must be recouped elsewhere, thus putting pressure on the states to recover these costs through local rates.[1632]

659. Despite their objections to embedded cost recovery, some non-incumbent parties explain conditions under which some limited recovery should be permitted. For example, MCI argues that, although embedded costs should not be recovered, it would be appropriate to

[1626] NYNEX comments 54-56, reply at 27.

[1627] USTA comments at 55.

[1628] *See, e.g.*, Bell Atlantic comments at Attachment 1 (Affidavit of Professor Jerry A. Hausman), p.2; Lincoln Tel. comments at 16-17; USTA reply at 23.

[1629] *See, e.g.*, Ameritech reply at 30-31; BellSouth comments at 57; Lincoln Tel. comments at 16-17.

[1630] *See* Bell Atlantic reply at Exhibit 2 (Declaration of Richard A. Epstein), p.4.

[1631] *E.g.*, Home Tel. comments at 4; NECA comments at 9; TCA comments at 8; Texas Statewide Tel. Cooperative, Inc. comments at 9; Bay Springs reply at 10.

[1632] *See, e.g.*, USTA comments at 56; Wyoming Commission comments at 31-32; *see also* New York Commission reply at 9; *cf.*, Alabama Commission comments at 24-25; Texas Commission comments at 23, 26.

allow incumbent LECs to recover any depreciation reserve deficiency,[1633] which MCI estimates is only a small percentage of the residual between existing revenues and the revenues generated by a forward-looking, TSLRIC pricing of unbundled network elements.[1634] The Ad Hoc Telecommunications Users Committee asserts that, at a minimum, any nominal losses in economic value attributed to stranded investment should be weighed against the appreciation in value that incumbent LECs have experienced as reflected in share prices and market-to-book ratios.[1635] The Consumer Federation of America proposes that stranded investment might be recovered through an industry-wide recovery fund, if incumbent LECs can satisfy a rigorous set of showings to ensure that ratepayers are fairly treated.[1636] Finally, AT&T argues that, if the Commission determines that some portion of the residual should be recovered, it should be recovered through a competitively neutral, transitional, funding and distribution mechanism that will not distort competition.[1637]

660. *Opportunity Cost -- ECPR.* Incumbent LECs are the primary advocates for ECPR pricing of interconnection and unbundled network elements.[1638] They argue generally that ECPR is the approach that most closely parallels the method a firm in a competitive market would employ when faced with the opportunity of selling inputs to firms that intend to compete with it in its final product market.[1639] GTE asserts that the ECPR's purpose is to reward efficient entry into the market for the end product by ensuring that the incumbent LEC

[1633] A reserve imbalance exists when the carrier's actual "book" depreciation reserve differs from its "theoretical" reserve, which is the reserve which would exist if service lives and salvage values had been accurately forecast in the past. When the theoretical reserve exceeds the book reserve, the imbalance is a reserve deficiency. For most LECs the reserve imbalance is an overall deficiency. *Amortization of Depreciation Reserve Imbalances of Local Exchange Carriers*, CC Docket No. 87-447, Report and Order, 3 FCC Rcd 984 (1988).

[1634] *See* MCI comments at 73-75.

[1635] Ad Hoc Telecommunications Users Committee comments at 26-27.

[1636] *See* CFA/CU comments at 67-68.

[1637] *See* AT&T comments at 70-73.

[1638] *See, e.g.*, Ameritech comments at 91-93; GTE reply at 36-38; MECA comments at 50-52; PacTel comments at 69-71; SBC comments at Appendix A (Efficient Component Pricing Rule), pp.1-5; *see also* PacTel reply at Appendix C (Declaration of Richard D. Emerson).

[1639] *See, e.g.*, Rural Tel. Coalition reply at 28-30.

sells network access to itself and to its rivals on the same, nondiscriminatory terms.[1640] Thus, GTE claims, the ECPR sets prices for network elements that provide incentives for efficient entry and compensates incumbent LECs for the economic costs associated with sale of such elements.[1641] GTE further argues that ECPR accomplishes these tasks regardless of the market structure and regardless of the presence or absence of economic rents.[1642] SBC argues that the ECPR is equivalent to the avoided cost rule used for setting the prices of resold services and equivalent to the efficient imputation rule for pricing of retail services.[1643] Supporters of ECPR pricing also argue that prices will continue to move toward competitive levels where competition is provided by a more efficient carrier than the incumbent LEC.[1644]

661. New entrants and many other commenters oppose the use of the ECPR to set prices for interconnection and access to unbundled network elements.[1645] These parties argue that ECPR does not comply with the statutory mandate that interconnection and network elements be based on costs. They assert that using ECPR would allow incumbent LECs to retain monopoly rents and protect the incumbent LECs from competitive disciplinary market forces.[1646] Opponents of ECPR contend that ECPR pricing does not replicate a competitive environment, but instead perpetuates inefficient and anticompetitive aspects of the current pricing structure. Other commenters argue that the incumbent LECs may use ECPR to exclude or marginalize a more efficient rival in the complementary market by forcing the rival

[1640] GTE comments at Attachment 4 (An Empirical Analysis of Pricing Under Sections 251 and 252 of the Telecommunications Act of 1996), p.7.

[1641] *Id.* at p.I-i

[1642] *Id.* at p.III-7.

[1643] SBC comments at Appendix A (Efficient Component Pricing Rule), pp.1-5.

[1644] *See, e.g.*, Ameritech comments at 93; GTE comments at Attachment 4 (An Empirical Analysis of Pricing Under Sections 251 and 252 of the Telecommunications Act of 1996), p.III-6-8.

[1645] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 55; ALTS reply at 26-29; Cable & Wireless comments 35; California Commission reply at 20; CFA/CU comments at 41-45; CompTel reply at 40-49; Cox reply at 29; DoJ reply at 11-13; Frontier comments at 23; Mass. Attorney General comments at 6-9; MCI comments at 70-71, reply at 16; MFS comments at 60 n.67; Ohio Consumers' Counsel comments at 25 n.7, reply at 15; Sprint comments at 59 n.33; Texas Public Utility Counsel comments at 36; Time Warner comments at 56-58; Telecommunications Resellers Ass'n comments at 41-42; WinStar comments at 41.

[1646] *See, e.g.*, Cable & Wireless comments 35; California Commission reply at 20; CompTel reply at 40; Mass. Attorney General comments at 6-8; Time Warner comments 56-58; Telecommunications Resellers Ass'n comments at 41-42.

to operate on the higher end of its cost curve through higher interconnection charges. They also argue that prices based on ECPR create incentives for incumbent LECs to shift costs of their competitive services to their bottleneck services, which distorts competition.[1647] Finally, opponents of ECPR assert that ECPR pricing shields the largest share of costs possible from competition, preserves the status quo, and imposes a barrier to entry.[1648]

662. Baumol, Ordover, and Willig, principal authors of the theory, explain that ECPR is not applicable for pricing of interconnection and unbundled network elements because the existing end user rates for local telecommunications are not appropriate as a baseline for ECPR. They claim that cross-subsidies are common in the current rates, and rates depart systematically from pertinent costs. Baumol, Ordover, and Willig conclude that applying ECPR to existing rates would result in component prices that lock in the incumbent LECs' monopoly profits and pricing inefficiencies, and would attract inefficient entry, where rates are too high, and would preclude efficient entry where rates are too low.[1649]

663. *Universal Service Subsidies.* Most parties other than incumbent LECs and some state commissions agree that it would be inconsistent with both the cost-based rate requirements of section 252(d)(1) and the requirement in section 254(b)(5), that universal service support mechanisms "be specific [and] predictable. . ."[1650] for states to include any universal service subsidies in the rates they set for interconnection, collocation, and unbundled network elements.[1651] They argue that the 1996 Act requires that rates reflect the economic cost of providing network elements and interconnection and does not authorize subsidies that have nothing to do with economic costs.[1652] With regard to the requirements of section 254,

[1647] *See, e.g.*, N. Economides comments at 4-6.

[1648] *See, e.g.*, CFA/CU comments at 42.

[1649] *See* AT&T comments at Appendix C (Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig), pp.8-9.

[1650] 47 U.S.C. § 254(b)(5).

[1651] *See, e.g.*, ACTA comments at 23; AT&T comments at 70-73; Competition Policy Institute comments at 20; CompTel comments at 73-74; DoJ comments at 56-59; MCI comments at 75; NEXTLINK comments at 29; Sprint comments at 61-62; Telecommunications Resellers Ass'n comments at 39 n.76; Teleport comments at 48-49; WinStar comments at 40-41, reply at 13-14.

[1652] AT&T and CompTel further contend that to permit any universal service subsidies in the rates set for interconnection, collocation and unbundled network elements would be to base rates on the embedded costs of incumbent LEC expenditures rather than the forward-looking economic costs of providing a network element as mandated by section 252(d)(1). *See* AT&T comments at 70-73; CompTel comments at 72-74.

these parties argue that, to the extent rates need to be subsidized for universal service purposes, the subsidy should be collected from all carriers on a non-discriminatory and competitively neutral basis.[1653] The Washington Commission relates its own experience of rejecting US West's request for a per minute universal service charge to cover "carrier of last resort" obligations and its finding that residential rates were sufficient to cover the costs of residential service.[1654]

664. In contrast, several incumbent LECs and state public utility commissions maintain that incumbent LECs should be permitted to recover their embedded costs in the rates set for interconnection, collocation, and unbundled network elements. These commenters claim that rates based on incremental costs alone fail to account for certain costs historically incurred to accomplish carrier-of-last-resort and universal service social policy objectives.[1655] The Attorneys General caution the Commission not to classify legitimate contributions to joint and common costs as impermissible implicit universal service subsidies.[1656]

665. Several parties comment on the issue of how universal service funding should be handled during the interim period between the effective date of this order and the effective date of the Commission's order implementing the section 254 universal service requirements in May 1997. AT&T proposes that the Commission adopt a competitively-neutral funding and distribution mechanism.[1657] CompTel proposes that the Commission grant a blanket waiver of incremental cost pricing for exchange access. Under CompTel's plan, pending completion of the section 254 proceeding, the incumbent LECs would continue to provide exchange access pursuant to their intrastate and interstate carrier-to-carrier access charge tariffs. At the conclusion of the section 254 proceeding, the Commission would determine whether the incumbent LECs are entitled to recover any portion of those revenues from competitive carriers and, if so, devise appropriate mechanisms for doing so. CompTel asserts

[1653] *See, e.g.*, ACTA comments at 23; AT&T comments at 69; Massachusetts Commission comments at 8-10; MCI comments at 75; Michigan Commission comments at 19.

[1654] Washington Commission reply at 6.

[1655] *See, e.g.*, Alabama Commission comments at 24-25; Bay Springs, *et al.* comments at 16; BellSouth comments at 57; Matanuska Tel. comments at 2-3; TDS comments at 20; SBC comments at 89; Western Alliance comments at 6-7; *but see* BellSouth comments at 57 (if the universal service proceeding establishes a federal fund or if the states establish explicit funds, there will be no need for subsidies to be built into interconnection and unbundled network element rates).

[1656] Attorneys General reply at 10-11.

[1657] AT&T comments at 73.

that, by preserving the status quo for exchange access until those issues are fully considered and resolved, the Commission would ensure that the 1996 Act does not cause any unnecessary short-term disruption to carriers or consumers.[1658]

666. The Western Alliance contends that states should have authority to order the recovery of lost contribution through access charges until explicit and competitively neutral support mechanisms are in place.[1659] Similarly, the Massachusetts Commission argues that the states should have authority to include universal service subsidies in the rates for interconnection during this period. The Massachusetts Commission further contends that prohibiting states from exercising this authority will promote inefficient competition and ultimately could result in confiscation claims being filed by incumbent LECs.[1660]

667. Some parties take the position that "play or pay" proposals incorporate implicit subsidies into rates for interconnection and unbundled network elements and are therefore inconsistent with the 1996 Act.[1661] They further argue that such programs violate the 1996 Act because they do not require all telecommunications carriers to contribute on an equitable and nondiscriminatory basis and do not qualify as "specific, predictable and sufficient mechanisms" to preserve and advance universal service.[1662]

668. Other commenters argue, however, that the 1996 Act permits reasonable differences in interconnection rates charged to carriers so long as similarly-situated carriers are treated alike. They maintain that the anti-discrimination provisions of the 1996 Act only prohibit unreasonable discrimination. Thus, they contend that "play or pay" schemes are consistent with the 1996 Act.[1663] Several parties also contend that such schemes are authorized by the reservation of state power to adopt and implement universal service measures in section 254.[1664] Moreover, the New York Commission argues that the section

[1658] CompTel comments at 84.

[1659] Western Alliance comments at 6-7.

[1660] Mass. Commission comments at 9-10.

[1661] *See, e.g.*, Frontier comments at 23; Teleport comments at 48-49; Texas Public Utility Counsel comments at 35-36; WinStar reply at 14 n.20.

[1662] WinStar comments at 40; *see also* Texas Public Utility Counsel comments at 35.

[1663] *See, e.g.*, New York Commission comments at 15-18; NYNEX comments at 91-97.

[1664] NYNEX comments at 95-97; New York Commission reply at 6.

254(e) requirement that universal service funding must be explicit applies only to the federal Universal Service Fund, which is yet to be established, and not to state initiatives.[1665]

669. Some commenters urge the Commission to address universal service in the section 254 proceeding rather than in the section 251/252 interconnection proceeding.[1666] Other commenters suggest that universal service, access restructure, and interconnection issues should be addressed in a coordinated manner or in a consolidated proceeding.[1667]

670. *Fifth Amendment Issues.* Several incumbent LECs claim that use of a LRIC-based pricing methodology that does not permit recovery of at least joint and common costs and a reasonable profit constitutes unlawful confiscation in violation of the Fifth and Fourteenth Amendments.[1668] Other LECs further argue that, in order to avoid an unconstitutional taking, any pricing rules we adopt must enable them to recover total costs, including historical or embedded costs.[1669] Generally, these parties contend that prices limited by a forward-looking economic cost methodology do not permit an incumbent LEC to remain profitable over time because LRIC fails to recover total costs.[1670] They assert that, if the Commission decides now, long after those costs have been sunk, to bar compensatory returns, it will violate due process and undermine the incumbent LECs' legitimate, investment-backed expectations.[1671] Such interference with legitimate investor expectations, they contend, constitutes an unlawful taking.[1672] GTE contends that Commission adoption of a pure TSLRIC methodology would represent an unconstitutional taking, because it would require

[1665] New York Commission reply at 6.

[1666] *See, e.g.*, Competition Policy Institute comments at 13-14; F. Williamson comments at 8; Texas Public Utility Counsel comments at 36; ALTS reply at 35.

[1667] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 35; TDS comments at 20.

[1668] *See, e.g.*, GTE comments at 65-71; MECA comments at 42; Puerto Rico Telephone Company reply at 11-12; PacTel comments at 67.

[1669] *See, e.g.*, NYNEX comments at 43-44; PacTel comments at 65-66; SNET comments at 29; Roseville Tel. comments at 6-7.

[1670] *See, e.g.*, Ameritech comments at 62-70; GTE comments at 68-71, reply at 31-32; USTA comments at 39-42.

[1671] *See, e.g.*, GTE comments at 66-71, reply at 31-33; USTA comments at 40-45, reply at 21-25, 32-34.

[1672] *Id.*

use of the incumbent LEC's physical property, thus giving rise to an obligation to provide just compensation.[1673]

671. Other parties, including the Department of Justice and new entrants, contend that using a forward-looking cost-based pricing methodology for setting the rates for interconnection and unbundled elements does not constitute an unlawful taking.[1674] These commenters point out that many state commissions already utilize a forward-looking cost-based pricing methodology.[1675] They also argue that, because forward-looking cost-based rates capture all costs for interconnection and unbundled network elements, including the risk-adjusted cost of capital, such a methodology would not result in an unlawful taking.[1676] These parties further assert that the LECs' takings claims are premature, not demonstrated with sufficient specificity, and overstate the scope of the constitutional guarantee.[1677] Commenters note that no incumbent LEC has made any effort to demonstrate the actual impact of a LRIC-based pricing methodology on its "financial integrity."[1678] These parties contend that there is no unconstitutional impairment if the shortfall is not sufficient to jeopardize the operating and financial integrity of the utility. Finally, these commenters maintain that there is no constitutional right to a particular rate-setting methodology (*i.e.*, historical cost) and there are no general principles that require every component of an integral whole of a utility service to show a profit.[1679]

[1673] *See* GTE comments at 65-67.

[1674] *See, e.g.*, ALTS reply at 8-11; AT&T comments at 70-71; CompTel reply at 37-40; DoJ reply at 13, 16-19; MCI reply at 18-20.

[1675] *See, e.g.*, AT&T comments at 49-50; Cable & Wireless reply at 24-25; MCI reply at 19. AT&T also notes that when U S West and BellSouth have been new entrants into markets, they have advocated a LRIC approach. AT&T comments at 50-51 n.72.

[1676] *See, e.g.*, Frontier reply at 14; MCI reply at 18-19.

[1677] *See, e.g.*, DoJ reply at 16-18.

[1678] DoJ reply at 16-18; MCI reply at 18.

[1679] *See, e.g.*, Jones Intercable reply at 16-17.

(3) Discussion

672. *Overview.* Having concluded in Section II.D., above, that we have the requisite legal authority and that we should establish national pricing rules, we conclude here that prices for interconnection and unbundled elements pursuant to sections 251(c)(2), 251(c)(3), and 252(d)(1), should be set at forward-looking long-run economic cost. In practice, this will mean that prices are based on the TSLRIC of the network element, which we will call Total Element Long Run Incremental Cost (TELRIC), and will include a reasonable allocation of forward-looking joint and common costs. The 1996 Act encourages competition by removing barriers to entry and providing an opportunity for potential new entrants to purchase unbundled incumbent LEC network elements to compete efficiently to provide local exchange services. We believe that the prices that potential entrants pay for these elements should reflect forward-looking economic costs in order to encourage efficient levels of investment and entry.

673. In this section, we describe this forward-looking, cost-based pricing standard in detail. First, we define the terms we are using, explain how the methodology we are adopting differs from other costing approaches, and describe how it should be implemented. In particular, we explain that the price of a network element should include the forward-looking costs that can be attributed directly to the provision of services using that element, which includes a reasonable return on investment (*i.e.*, "profit"), plus a reasonable share of the forward-looking joint and common costs. Second, we address potential cost measures that must not be included in a TELRIC analysis, such as embedded (or historical) costs, opportunity costs, or universal service subsidies. Finally, we refute arguments that this methodology would violate the incumbent LECs' rights under the Fifth Amendment.

(a) Total Element Long Run Incremental Cost

674. *Definitions of Terms.* In light of the various possible definitions of a number of the critical economic terms used in this context, we begin by defining terms as we use them in this Order. Specifically, we provide definitions for the following terms: "incremental cost;" "economic cost;" "embedded or accounting cost;" "joint cost;" "common cost;" "long run incremental cost;" "total service long run incremental cost;" "total element long run incremental cost." In addition to defining these terms, we explain the economic rationale behind the concepts.

675. Incremental costs are the additional costs (usually expressed as a cost per unit) that a firm will incur as a result of expanding the output of a good or service by producing an additional quantity of the good or service.[1680] Incremental costs are forward-looking in the

[1680] *See* 1 Alfred Kahn *The Economics of Regulation* 66 (1971); William Baumol and Gregory Sidak, *Toward Competition in Local Telephony* 57 (1994).

sense that these costs are incurred as the output level changes by a given increment.[1681] The costs that are considered incremental will vary greatly depending on the size of the increment. For example, the incremental cost of carrying an additional call from a residence that is already connected to the network to its end office is virtually zero. The incremental cost of connecting a new residence to its end office, however, is the cost of the loop. Forward-looking incremental costs, plus a portion of the forward-looking joint and common costs, are sometimes referred to as "economic costs." Embedded or accounting costs are costs that firms incurred in the past for providing a good or service and are recorded as past operating expenses and depreciation. Due to changes in input prices and technologies, incremental costs may differ from embedded costs of that same increment. In competitive markets, the price of a good or service will tend towards its long-run incremental cost.

676. Certain types of costs arise from the production of multiple products or services. We use the term "joint costs" to refer to costs incurred when two or more outputs are produced in fixed proportion by the same production process (*i.e.*, when one product is produced, a second product is generated by the same production process at no additional cost). The term "common costs" refers to costs that are incurred in connection with the production of multiple products or services, and remains unchanged as the relative proportion of those products or services varies (*e.g.*, the salaries of corporate managers). Such costs may be common to all services provided by the firm or common to only a subset of those services or elements. If a cost is common with respect to a subset of services or elements, for example, a firm avoids that cost only by not providing each and every service or element in the subset. For the purpose of our discussion, we refer to joint and common costs as simply common costs unless the distinction is relevant in a particular context.

677. The term "long run," in the context of "long run incremental cost," refers to a period long enough so that all of a firm's costs become variable or avoidable.[1682] The term "total service," in the context of TSLRIC, indicates that the relevant increment is the entire quantity of the service that a firm produces, rather than just a marginal increment over and above a given level of production. Depending on what services are the subject of a study, TSLRIC may be for a single service or a class of similar services. TSLRIC includes the incremental costs of dedicated facilities and operations that are used by only the service in question. TSLRIC also includes the incremental costs of shared facilities and operations that are used by that service as well as other services.

678. While we are adopting a version of the methodology commonly referred to as

[1681] William Baumol and Gregory Sidak, *Toward Competition in Local Telephony* 57 (1994).

[1682] *See, e.g.*, William Baumol, *Economic Theory and Operations Analysis* 290 (4th ed. 1977) ("The very long run is a period so long that all of the firm's present contracts will have run out, its present plant and equipment will have been worn out or rendered obsolete and will therefore need replacement, etc.").

TSLRIC as the basis for pricing interconnection and unbundled elements, we are coining the term "total element long run incremental cost" (TELRIC) to describe our version of this methodology. The incumbent LEC offerings to be priced using this methodology generally will be "network elements," rather than "telecommunications services," as defined by the 1996 Act.[1683] More fundamentally, we believe that TELRIC-based pricing of discrete network elements or facilities, such as local loops and switching, is likely to be much more economically rational than TSLRIC-based pricing of conventional services, such as interstate access service and local residential or business exchange service. As discussed in greater detail below, separate telecommunications services are typically provided over shared network facilities, the costs of which may be joint or common with respect to some services. The costs of local loops and their associated line cards in local switches, for example, are common with respect to interstate access service and local exchange service, because once these facilities are installed to provide one service they are able to provide the other at no additional cost. By contrast, the network elements, as we have defined them,[1684] largely correspond to distinct network facilities. Therefore, the amount of joint and common costs that must be allocated among separate offerings is likely to be much smaller using a TELRIC methodology rather than a TSLRIC approach that measures the costs of conventional services. Because it is difficult for regulators to determine an economically-optimal allocation of any such joint and common costs, we believe that pricing elements, defined as facilities with associated features and functions, is more reliable from the standpoint of economic efficiency than pricing services that use shared network facilities.

679. *Description of TELRIC-Based Pricing Methodology.* Adopting a pricing methodology based on forward-looking, economic costs best replicates, to the extent possible, the conditions of a competitive market. In addition, a forward-looking cost methodology reduces the ability of an incumbent LEC to engage in anti-competitive behavior. Congress recognized in the 1996 Act that access to the incumbent LECs' bottleneck facilities is critical to making meaningful competition possible. As a result of the availability to competitors of the incumbent LEC's unbundled elements at their economic cost, consumers will be able to reap the benefits of the incumbent LECs' economies of scale and scope, as well as the benefits of competition. Because a pricing methodology based on forward-looking costs simulates the conditions in a competitive marketplace, it allows the requesting carrier to produce efficiently and to compete effectively, which should drive retail prices to their competitive levels. We believe that our adoption of a forward-looking cost-based pricing methodology should facilitate competition on a reasonable and efficient basis by all firms in the industry by establishing prices for interconnection and unbundled elements based on costs similar to those incurred by the incumbents, which may be expected to reduce the regulatory

[1683] 47 U.S.C. §§ 3(29), 3(46).

[1684] *See supra* Section V.

burdens and economic impact of our decision for many parties, including both small entities seeking to enter the local exchange markets and small incumbent LECs.[1685]

680. We note that incumbent LECs have greater access to the cost information necessary to calculate the incremental cost of the unbundled elements of the network. Given this asymmetric access to cost data, we find that incumbent LECs must prove to the state commission the nature and magnitude of any forward-looking cost that it seeks to recover in the prices of interconnection and unbundled network elements.

681. Some parties express concern that the information required to compute prices based on forward-looking costs is inherently so hypothetical as to be of little or no practical value.[1686] Based on the record before us, we disagree. A number of states, which ultimately will have to review forward-looking cost studies in carrying out their duties under section 252, either have already implemented forward-looking, incremental costing methodologies to set prices for interconnection and unbundled network elements or support the use of such an approach.[1687] While these states have applied somewhat different definitions of, and approaches to setting prices developed on, an incremental cost methodology, the record demonstrates that such approaches are practical and implementable.

682. We conclude that, under a TELRIC methodology, incumbent LECs' prices for interconnection and unbundled network elements shall recover the forward-looking costs directly attributable to the specified element, as well as a reasonable allocation of forward-looking common costs. Per-unit costs shall be derived from total costs using reasonably accurate "fill factors" (estimates of the proportion of a facility that will be "filled" with network usage); that is, the per-unit costs associated with a particular element must be derived by dividing the total cost associated with the element by a reasonable projection of the actual total usage of the element. Directly attributable forward-looking costs include the incremental costs of facilities and operations that are dedicated to the element. Such costs typically include the investment costs and expenses related to primary plant used to provide that element. Directly attributable forward-looking costs also include the incremental costs of

[1685] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

[1686] *See, e.g.*, GVNW comments at 35; NYNEX comments at 54; USTA comments at 47-50.

[1687] *See, e.g.*, Louisiana Commission comments at 4; Texas Commission comments at 22; Washington Commission comments at 25; California Commission comments at 28-29; Colorado Commission comments at 35; Maryland Commission comments at 7-8; Oklahoma Commission comments at Attachment A (Oklahoma Corporation Commission Telephone Rules, OAC 165:55) pp. 10-11. The Wyoming and Florida commissions have indicated their support for such an approach. *See* Wyoming Commission comments at 27 (supporting uniform use of TSLRIC costing methods so long as details left to states); *see also* Florida Commission comments at 26 (TSLRIC may be appropriate to set cost standard for a price floor).

shared facilities and operations. Those costs shall be attributed to specific elements to the greatest extent possible.[1688] For example, the costs of conduits shared by both transport and local loops, and the costs of central office facilities shared by both local switching and tandem switching, shall be attributed to specific elements in reasonable proportions. More broadly, certain shared costs that have conventionally been treated as common costs (or overheads) shall be attributed directly to the individual elements to the greatest extent possible. The forward-looking costs directly attributable to local loops, for example, shall include not only the cost of the installed copper wire and telephone poles but also the cost of payroll and other back office operations relating to the line technicians, in addition to other attributable costs.

683. Forward-looking cost methodologies, like TELRIC, are intended to consider the costs that a carrier would incur in the future. Thus, a question arises whether costs should be computed based on the least-cost, most efficient network configuration and technology currently available, or whether forward-looking cost should be computed based on incumbent LECs' existing network infrastructures, taking into account changes in depreciation and inflation. The record indicates three general approaches to this issue. Under the first approach, the forward-looking economic cost for interconnection and unbundled elements would be based on the most efficient network architecture, sizing, technology, and operating decisions that are operationally feasible and currently available to the industry. Prices based on the least-cost, most efficient network design and technology replicate conditions in a highly competitive marketplace by not basing prices on existing network design and investments unless they represent the least-cost systems available for purchase. This approach, however, may discourage facilities-based competition by new entrants because new entrants can use the incumbent LEC's existing network based on the cost of a hypothetical least-cost, most efficient network.

684. Under the second approach, the cost of interconnection and unbundled network elements would be based on existing network design and technology that are currently in operation.[1689] Because this approach is not based on a hypothetical network in the short run, incumbent LECs could recover costs based on their existing operations, and prices for interconnection and unbundled elements that reflect inefficient or obsolete network design and technology. This is essentially an embedded cost methodology.

685. Under the third approach, prices for interconnection and access to unbundled elements would be developed from a forward-looking economic cost methodology based on the most efficient technology deployed in the incumbent LEC's current wire center locations.

[1688] *Compare Telephone Company-Cable Television Cross-Ownership Rules*, CC Docket No. 87-266, Memorandum Opinion and Order on Reconsideration and Third Further Notice of Proposed Rulemaking, 10 FCC Rcd 244, 345-46 (1994).

[1689] *See, e.g.*, BellSouth reply at 37; Roseville Tel. reply at 8; USTA reply at 18-19.

This approach mitigates incumbent LECs' concerns that a forward-looking pricing methodology ignores existing network design, while basing prices on efficient, new technology that is compatible with the existing infrastructure. This benchmark of forward-looking cost and existing network design most closely represents the incremental costs that incumbents actually expect to incur in making network elements available to new entrants. Moreover, this approach encourages facilities-based competition to the extent that new entrants, by designing more efficient network configurations, are able to provide the service at a lower cost than the incumbent LEC. We, therefore, conclude that the forward-looking pricing methodology for interconnection and unbundled network elements should be based on costs that assume that wire centers will be placed at the incumbent LEC's current wire center locations, but that the reconstructed local network will employ the most efficient technology for reasonably foreseeable capacity requirements.

686. We agree with USTA, Bell Atlantic, and BellSouth that, as a theoretical matter, the combination of significant sunk investment, declining technology costs, and competitive entry may increase the depreciation costs and cost of capital of incumbent LECs. We do not agree, however, that TSLRIC does not or cannot account for risks that an incumbent LEC incurs because it has sunk investments in facilities. On the contrary, properly designed depreciation schedules should account for expected declines in the value of capital goods. Both AT&T and MCI appear to agree with this proposition.[1690] For example, AT&T states, "[i]n order to estimate TSLRIC, one must perform a discounted cash flow analysis of the future costs associated with the decision to invest . . . . One-time costs associated with the acquisition of capital goods are amortized over the economic life of the assets using the user cost of capital . . . , which requires accounting for both expected capital good price changes and economic depreciation."[1691] Moreover, we are confident that parties to an arbitration with TELRIC studies can propose specific depreciation rate adjustments that reflect expected asset values over time.

687. As noted, we also agree that, as a matter of theory, an increase in risk due to entry into the market for local exchange service can increase a LEC's cost of capital. We believe that this increased risk can be partially mitigated, however, by offering term discounts, since long-term contracts can minimize the risk of stranded investment. In addition, growth in overall market demand can increase the potential of the incumbent LEC to use some of its

[1690] *See* Letter from Leonard S. Sawicki, Director, FCC Affairs, MCI Telecommunications Corp. to William F. Caton, Acting Secretary, FCC, July 24, 1996 at Attachment (Depreciation and Capital Recovery Issues: A Response to Professor Hausman), pp.1-3; *see also* Letter from Richard N. Clarke, AT&T, to William F. Caton, Acting Secretary, FCC, July 19, 1996 at Attachment (Capital Recovery Issues in TSLRIC Pricing: Response to Professor Jerry A. Hausman).

[1691] Letter from Richard N. Clarke, AT&T, to William F. Caton, Acting Secretary, FCC, July 19, 1996 at Attachment (Capital Recovery Issues in TSLRIC Pricing: Response to Professor Jerry A. Hausman), p.8.

displaced facilities for other purposes. Overall, we think that these factors can and should be captured in any LRIC model and therefore we do not agree that this requires a departure from the general principle of forward-looking cost-based pricing for network elements.

688. We are not persuaded by USTA's argument that forward looking methodologies fail to adjust the cost of capital to reflect the risks associated with irreversible investments and that they are "biased downward by a factor of three." First, USTA's argument unrealistically assumes that competitive entry would be instantaneous. The more reasonable assumption of entry occurring over time will reduce the costs associated with sunk investment. Second, we find it unlikely that investment in communications equipment is entirely irreversible or that such equipment would become valueless once facilities-based competition begins. In a growing market, there most likely would be demand for at least some embedded telecommunications equipment, which would therefore retain its value. Third, contractual arrangements between the new entrant and the incumbent that specifically address USTA's concerns and protect incumbent's investments during transition can be established.

689. Finally we are not persuaded that the use by firms of hurdle rates that exceed the market cost of capital is convincing evidence that sunk investments significantly increase a firm's cost of capital. An alternative explanation for this phenomenon is that the process that firms use to choose among investment projects results in overestimates of their returns. Firms therefore use hurdle rates in excess of the market cost of capital to account for these overestimates.[1692]

690. *Summary of TELRIC Methodology.* The following summarizes our conclusions regarding setting prices of interconnection and access to unbundled network elements based on the TELRIC methodology for such elements. The increment that forms the basis for a TELRIC study shall be the entire quantity of the network element provided. As we have previously stated, all costs associated with the providing the element shall be included in the incremental cost. Only forward-looking, incremental costs shall be included in a TELRIC study. Costs must be based on the incumbent LEC's existing wire center locations and most efficient technology available.

691. Any function necessary to produce a network element must have an associated cost. The study must explain with specificity why and how specific functions are necessary to provide network elements and how the associated costs were developed. Only those costs that are incurred in the provision of the network elements in the long run shall be directly

[1692] *See* Richard Thaler, *The Winner's Curse*, 2 J. Econ. Perspectives 201 (1988); Keith Brown, *Note on the Apparent Bias of Net Revenue Estimates for Capital Investment Projects*, 29 J. Fin. 1215-16 (1974); Daniel Kahneman and Daniel Lovallo, *Timid Choices, Bold Forecasts*, 39 Management Science 17, 28 (1993). In addition, we note that Hausman's arguments that TSLRIC method underestimate the true cost of an element apply only to the capital expense associated with an element and not to the operating expense.

attributable to those elements. Costs must be attributed on a cost-causative basis. Costs are causally-related to the network element being provided if the costs are incurred as a direct result of providing the network elements, or can be avoided, in the long run, when the company ceases to provide them. Thus, for example, the forward-looking costs of capital (debt and equity) needed to support investments required to produce a given element shall be included in the forward-looking direct cost of that element. Directly attributable costs shall include costs such as certain administrative expenses, which have traditionally been viewed as common costs, if these costs vary with the provision of network elements. Retailing costs, such as marketing or consumer billing costs associated with retail services, are not attributable to the production of network elements that are offered to interconnecting carriers and must not be included in the forward-looking direct cost of an element.

692. In a TELRIC methodology, the "long run" used shall be a period long enough that all costs are treated as variable and avoidable.[1693] This "long run" approach ensures that rates recover not only the operating costs that vary in the short run, but also fixed investment costs that, while not variable in the short term, are necessary inputs directly attributable to providing the element.

693. States may review a TELRIC economic cost study in the context of a particular arbitration proceeding, or they may conduct such studies in a rulemaking and apply the results in various arbitrations involving incumbent LECs. In the latter case, states must replace any interim rates[1694] set in arbitration proceedings with the permanent rate resulting from the separate rulemaking. This permanent rate will take effect at or about the time of the conclusion of the separate rulemaking and will apply from that time forward.

694. *Forward-Looking Common Costs.* Certain common costs are incurred in the provision of network elements. As discussed above, some of these costs are common to only a subset of the elements or services provided by incumbent LECs. Such costs shall be allocated to that subset, and should then be allocated among the individual elements or services in that subset, to the greatest possible extent. For example, shared maintenance facilities and vehicles should be allocated only to the elements that benefit from those facilities and vehicles. Common costs also include costs incurred by the firm's operations as a whole, that are common to all services and elements (*e.g.*, salaries of executives involved in overseeing all activities of the business), although for the purpose of pricing interconnection and access to unbundled elements, which are intermediate products offered to competing carriers, the relevant common costs do not include billing, marketing, and other costs

[1693] *See* 1 Alfred E. Kahn *The Economics of Regulation: Principles and Institutions* 70-71 (1988).

[1694] *See infra*, Section VII.C., discussing default proxy price ceilings and ranges.

attributable to the provision of retail service.[1695] Given these common costs, setting the price of each discrete network element based solely on the forward-looking incremental costs directly attributable to the production of individual elements will not recover the total forward-looking costs of operating the wholesale network.[1696] Because forward-looking common costs are consistent with our forward-looking, economic cost paradigm, a reasonable measure of such costs shall be included in the prices for interconnection and access to network elements.

695. The incumbent LECs generally argue that common costs are quite significant,[1697] while several other parties maintain that these amounts are minimal.[1698] Because the unbundled network elements correspond, to a great extent, to discrete network facilities, and have different operating characteristics, we expect that common costs should be smaller than the common costs associated with the long-run incremental cost of a service. We expect that many facility costs that may be common with respect to the individual services provided by the facilities can be directly attributed to the facilities when offered as unbundled network elements. Moreover, defining the network elements at a relatively high level of aggregation, as we have done,[1699] should also reduce the magnitude of the common costs. A properly conducted TELRIC methodology will attribute costs to specific elements to the greatest possible extent, which will reduce the common costs. Nevertheless, there will remain some common costs that must be allocated among network elements and interconnection services. For example, at the sub-element level of study (*e.g.*, identifying the respective costs of 2-wire loops, 4-wire loops, ISDN loops, and so on), common costs may be a significant proportion of all the costs that must be recovered from sub-elements. Given the likely asymmetry of information regarding network costs, we conclude that, in the arbitration process, incumbent LECs shall have the burden to prove the specific nature and magnitude of these forward-looking common costs.

696. We conclude that forward-looking common costs shall be allocated among elements and services in a reasonable manner, consistent with the pro-competitive goals of the

[1695] *See infra*, Section VIII.B., describing "avoided costs" in the resale context.

[1696] *See, e.g.*, AT&T comments at 61-66; Teleport comments at 47-48.

[1697] *See, e.g.*, PacTel reply at 27-28; *see also* Cincinnati Bell reply at 10; USTA comments at Attachment 1 (Affidavit of Jerry A. Hausman), p.4 n.1.

[1698] *See, e.g.*, Competition Policy Institute comments at 19; MCI comments at 66; Texas Public Utility Counsel comments at 24.

[1699] *See supra*, Section V., discussing unbundling requirements.

1996 Act. One reasonable allocation method would be to allocate common costs using a fixed allocator, such as a percentage markup over the directly attributable forward-looking costs. We conclude that a second reasonable allocation method would allocate only a relatively small share of common costs to certain critical network elements, such as the local loop and collocation, that are most difficult for entrants to replicate promptly (*i.e.*, bottleneck facilities). Allocation of common costs on this basis ensures that the prices of network elements that are least likely to be subject to competition are not artificially inflated by a large allocation of common costs. On the other hand, certain other allocation methods would not be reasonable. For example, we conclude that an allocation methodology that relies exclusively on allocating common costs in inverse proportion to the sensitivity of demand for various network elements and services may not be used.[1700] We conclude that such an allocation could unreasonably limit the extent of entry into local exchange markets by allocating more costs to, and thus raising the prices of, the most critical bottleneck inputs, the demand for which tends to be relatively inelastic. Such an allocation of these costs would undermine the pro-competitive objectives of the 1996 Act.

697. We believe that our treatment of forward-looking common costs will minimize regulatory burdens and economic impact for all parties involved in arbitration of agreements for interconnection and access to unbundled elements, and will advance the 1996 Act's pro-competitive objectives for local exchange and exchange access markets.[1701] In our decisionmaking, we have considered the economic impact of our rules in this section on small incumbent LECs. For example, although opposed to the use of a forward-looking, economic cost methodology, small incumbent LECs favor the recovery of joint and common costs in the event the Commission adopts forward-looking cost methodology. We are adopting such an approach. Moreover, the cost-based pricing methodology that we are adopting is designed to permit incumbent LECs to recover their economic costs of providing interconnection and unbundled elements, which may minimize the economic impact of our decisions on incumbent LECs, including small incumbent LECs. We also note that certain small incumbent LECs are not subject to our rules under section 251(f)(1) of the 1996 Act, unless otherwise determined by a state commission, and certain other small incumbent LECs may seek relief from their state commissions from our rules under section 251(f)(2) of the 1996 Act.[1702]

[1700] *See* Frank P. Ramsey, *A Contribution to the Theory of Taxation*, 37 Econ. J. 47 (1927); *see generally* Kenneth E. Train, *Optimal Regulation: The Economic Theory of Natural Monopoly* 115-40 (1992) (discussing efficiency properties of Ramsey prices); Bridger M. Mitchell & Ingo Vogelsang, *Telecommunications Pricing: Theory and Practice* 43-61 (1991). The sensitivity of demand is measured by the elasticity of demand, which is defined as the percentage change in the quantity of a service demanded for a one per cent change in price.

[1701] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

[1702] 47 U.S.C. § 251(f).

698. We further conclude that, for the aggregate of all unbundled network elements, incumbent LECs must be given a reasonable opportunity to recover their forward-looking common costs attributable to operating the wholesale network. In no instance should prices exceed the stand-alone cost for a specific element, and in most cases they should be below stand-alone costs. Stand-alone costs are defined as the forward-looking cost that an efficient entrant would incur in providing a given element or any combination of elements. No price higher than stand-alone cost could be sustained in a market from which entry barriers were completely absent. Where there are few common costs, there is likely to be only a minimal difference between the forward-looking costs that are directly attributable to the particular element, which excludes these costs, and stand-alone cost, which includes all of them. Network elements should not, however, be priced at levels that would enable the incumbent LEC to recover the same common costs multiple times from different elements. Any multiple recovery would be unreasonable and thus in violation of the statutory standard. Further, we note that the sum of the direct costs and the forward-looking common costs of all elements will likely differ from the incumbent LEC's historical, fully distributed costs.

699. *Reasonable Return on Investment and "Profit."* Section 252(d)(1) states that rates for interconnection and access to unbundled elements "may include a reasonable profit."[1703] We find that the TELRIC pricing methodology we are adopting provides for such a reasonable profit and thus no additional profit is justified under the statutory language. We note there are two types of profit. First, in plain English, profit is defined as "the excess of returns over expenditure in a transaction or a series of transactions."[1704] This is also known as a "normal" profit, which is the total revenue required to cover all of the costs of a firm, including its opportunity costs.[1705] Second, there is "economic" profit, which is any return in excess of normal profit.[1706] Thus, for example, if the normal return in an industry is 10 percent and a firm earns a return of 14 percent, the economic profit for that firm is 4 percent. Economic is also referred to as "supranormal" profit. We conclude that the definition of "normal" profit is embodied in "reasonable profit" under Section 252(d)(1).

700. The concept of normal profit is embodied in forward-looking costs because the forward-looking cost of capital, *i.e.*, the cost of obtaining debt and equity financing, is one of the forward-looking costs of providing the network elements. This forward-looking cost of capital is equal to a normal profit. We conclude that allowing greater than normal profits

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[1703] 47 U.S.C. § 252(d)(1).

[1704] *Webster's New Collegiate Dictionary* 931 (10th ed. 1994).

[1705] *See* David W. Pearce, *The MIT Dictionary of Modern Economics* (1994) at 310.

[1706] *Id.* at 415.

would not be "reasonable" under sections 251(c) and 252(d)(1).[1707] Thus, contrary to the arguments put forth by several incumbent LECs, we find that adding an additional measure of profit to the risk-adjusted cost of capital[1708] in setting the prices for interconnection and access to unbundled elements would violate the requirements of sections 251(c) and 252(d)(1) of the 1996 Act.

701. Possible accounting losses from the sale of interconnection and unbundled network elements using a reasonable forward-looking cost-based methodology do not necessarily indicate that incumbent LECs are being denied a "reasonable profit" under the statute. The use of a forward-looking, economic, cost-based pricing methodology, including a reasonable allocation of legitimate joint and common costs, will permit incumbent LECs the opportunity to earn a reasonable return on their investment in network elements. Finally, contrary to PacTel's argument, and as discussed below in detail, we conclude that our forward-looking cost-based pricing methodology is consistent with the Fifth Amendment and is not confiscatory.

[1707] We note that our interpretation is consistent with existing Supreme Court precedent concerning what constitutes a reasonable rate of return for a regulated public utility. For example, in *Bluefield Water Works*, the Court stated:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures.

Bluefield Water Works & Improvement Co. v. Public Service Comm'n of West Virginia, 262 U.S. 679, 692-93 (1923). Similarly, in *FPC v. Hope Natural Gas*, the Court stated:

> . . . it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock . . . By that standard the return to the equity owner should be commensurate with risks on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.

Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591, 603 (1994) (*Hope Natural Gas*). *Cf.*, Charles F. Phillips, Jr., *The Economics of Regulation* 260 (Rev. ed. 1965) (". . . a regulated company must be afforded the opportunity not only of assuring its financial integrity so that it can maintain its credit standing and attract additional capital as needed, but also for earnings comparable to those of other companies having corresponding risks.").

[1708] *See supra*, this Section, for a discussion of risk-adjusted cost of capital.

702. Based on the current record, we conclude that the currently authorized rate of return at the federal or state level is a reasonable starting point for TELRIC calculations, and incumbent LECs bear the burden of demonstrating with specificity that the business risks that they face in providing unbundled network elements and interconnection services would justify a different risk-adjusted cost of capital or depreciation rate. These elements generally are bottleneck, monopoly services that do not now face significant competition. We recognize that incumbent LECs are likely to face increased risks given the overall increases in competition in this industry, which generally might warrant an increased cost of capital, but note that, earlier this year, we instituted a preliminary inquiry as to whether the currently authorized federal 11.25 percent rate of return is too high given the current marketplace cost of equity and debt.[1709] On the basis of the current record, we decline to engage in a time-consuming examination to determine a new rate of return, which may well require a detailed proceeding. States may adjust the cost of capital if a party demonstrates to a state commission that either a higher or lower level of cost of capital is warranted, without that commission conducting a "rate-of-return or other rate based proceeding."[1710] We note that the risk-adjusted cost of capital need not be uniform for all elements. We intend to re-examine the issue of the appropriate risk-adjusted cost of capital on an ongoing basis, particularly in light of the state commissions' experiences in addressing this issue in specific situations.

703. We disagree with the conclusion that, when there are mostly sunk costs, forward-looking economic costs should not be the basis for pricing interconnection elements. The TELRIC of an element has three components, the operating expenses, the depreciation cost,[1711] and the appropriate risk-adjusted cost of capital. We conclude that an appropriate calculation of TELRIC will include a depreciation rate that reflects the true changes in economic value of an asset and a cost of capital that appropriately reflects the risks incurred by an investor. Thus, even in the presence of sunk costs, TELRIC-based prices are an appropriate pricing methodology.

[1709] *See Common Carrier Bureau Sets Pleading Schedule in Preliminary Rate of Return Inquiry*, Public Notice, 11 FCC Rcd 3651 (Com. Car. Bur. 1996).

[1710] 47 U.S.C. § 252(d)(1)(A)(i).

[1711] Depreciation is the method of recognizing as an expense the cost of a capital investment. Properly calculated economic depreciation is a periodic reduction in the book value of an asset that makes the book value equal to its economic or market value.

(b) Cost Measures Not Included in Forward-Looking Cost Methodology

704. *Embedded Costs.* We read section 252(d)(1)(A)(i) to prohibit states from conducting traditional rate-of-return or other rate-based proceedings to determine rates for interconnection and access to unbundled network elements. We find that the parenthetical, "(determined without reference to a rate-of-return or other rate-based proceeding)," [1712] does not further define the type of costs that may be considered, but rather specifies a type of proceeding that may not be employed to determine the cost of interconnection and unbundled network elements. The legislative history demonstrates that Congress was eager to set in motion expeditiously the development of local competition and intended to avoid imposing the costs and administrative burdens associated with a traditional rate case. Prior to the joint conference, the Senate version of the 1996 Act contained the parenthetical language. [1713] In addition, the Senate version of the 1996 Act eliminated rate-of-return regulation, [1714] as did the House version. [1715] Conferees removed the provisions eliminating rate-of-return regulation, but retained the parenthetical.

705. Section 252(d)(1)(A)(i) does not specify whether historical or embedded costs should be considered or whether only forward-looking costs should be considered in setting arbitrated rates. We are not persuaded by incumbent LEC arguments that prices for interconnection and unbundled network elements must or should include any difference between the embedded costs they have incurred to provide those elements and their current economic costs. Neither a methodology that establishes the prices for interconnection and access to network elements directly on the costs reflected in the regulated books of account, nor a price based on forward looking costs plus an additional amount reflecting embedded costs, would be consistent with the approach we are adopting. The substantial weight of economic commentary in the record suggests that an "embedded cost"-based pricing methodology would be pro-competitor -- in this

[1712] 47 U.S.C. § 252(d)(1)(A)(i).

[1713] S. 652, 104th Cong., 1st Sess. § 251(d)(6)(A) (1995) ("the charge (A) shall be (i) based on the cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the unbundled element . . . .").

[1714] *Id.* at § 301(a)(3) ("Rate of Return Regulation Eliminated -- (A) In instituting the price flexibility required under paragraph (1) the Commission and the States shall establish alternative forms of regulation for Tier 1 telecommunications carriers that do not include regulation of the rate of return earned by such carrier . . . .").

[1715] H.R. 1555, 104th Cong., 1st Sess. § 248(b) (1995) ("Abolition of Rate-of-Return Regulation -- Notwithstanding any other provision of law, to the extent that a carrier has complied with sections 242 and 244 of this part, the Commission, with respect to rates for interstate or foreign communications, and State commissions, with respect to rates for intrastate communications, shall not require rate-of-return regulation.").

case the incumbent LEC -- rather than pro-competition. [1716] We therefore decline to adopt embedded costs as the appropriate basis of setting prices for interconnection and access to unbundled elements. Rather, we reiterate that the prices for the interconnection and network elements critical to the development of a competitive local exchange should be based on the pro-competition, forward-looking, economic costs of those elements, which may be higher or lower than historical embedded costs. Such pricing policies will best ensure the efficient investment decisions and competitive entry contemplated by the 1996 Act, which should minimize the regulatory burdens and economic impact of our decisions on small entities. [1717]

706. Incumbent LECs contend generally that, in order to ensure they will recover their total investment costs and earn a profit, they must recover embedded costs. These costs, they argue, were incurred under federal and regulatory oversight and therefore should be recoverable. [1718] We are not convinced by the incumbent LECs' principal arguments for recognizing embedded cost in setting section 251 pricing rules. Even if the incumbent LECs' contention is correct, increasing the rates for interconnection and unbundled elements offered to competitors would interfere with the development of efficient competition, and is not the proper remedy for any past under-depreciation. Moreover, contrary to assertions by some incumbent LECs, regulation does not and should not guarantee full recovery of their embedded costs. Such a guarantee would exceed the assurances that we or the states have provided in the past. [1719] We have considered the economic impact of precluding recovery of small incumbent LECs' embedded costs. [1720] We do not believe that basing the prices of interconnection and unbundled elements on an incumbent LEC's embedded costs would advance the pro-competitive goals of the statute. We also note that certain small incumbent LECs are not subject to our rules under section 251(f)(1) of the 1996 Act, unless otherwise determined by a state commission, and certain other small incumbent LECs may seek relief from their state commissions from our rules under

[1716] *See, e.g.*, Ad Hoc Telecommunications Users' Committee reply at Appendix A (Interconnection Pricing Standards for Monopoly Rate Elements in a Potentially Competitive Local Telecommunications Market), p.4; ALTS comments at Attachment B (Competitive Pricing of Interconnection, Unbundled Elements, and Collocation), pp.28-29; AT&T reply at Appendix B (Reply Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig), pp.3-5; Competition Policy Institute comments at 18-19; DJ comments at 30-31.

[1717] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

[1718] *See, e.g.*, Ameritech reply at 31; BellSouth comments at 57; Lincoln Tel. comments at 16-17.

[1719] *See In the Matter of the Applications of Pacific Bell*, Order and Authorization, 10 FCC Rcd 12448, 12502-12503 (1995).

[1720] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

section 251(f)(2) of the 1996 Act.[1721]

707. We acknowledge that some incumbent LECs may have incurred certain embedded costs reasonably before the passage of the 1996 Act, based on different regulatory regimes. Some incumbent LECs may assert that they have made certain historical investments required by regulators that they have been denied a reasonable opportunity to recover in the past and that the incumbent LECs may no longer have a reasonable opportunity to recover in the new environment of the 1996 Act. The record before us, however, does not support the conclusion that significant residual embedded costs will necessarily result from the availability of network elements at economic costs. To the extent that any such residual consists of costs of meeting universal service obligations, the recovery of such costs can and should be considered in our ongoing universal service proceeding.[1722] To the extent a significant residual exists within the interstate jurisdiction that does not fall within the ambit of section 254, we intend that to address that issue in our upcoming proceeding on access reform.

708. *Opportunity Cost -- Efficient Component Pricing Rule.* A number of incumbent LECs advocate using the "efficient component pricing rule" (ECPR) to set the prices that incumbent LECs charge new entrants for inputs required to produce the same retail services the incumbent produces. Under the ECPR, the price of an input should be equal to the incremental cost of the input plus the opportunity cost that the incumbent carrier incurs when the new entrant provides the services instead of the incumbent. The opportunity cost, which is computed as revenues less all incremental costs, represents both profit and contribution to common costs of the incumbent, given the existing retail prices of the services being sold.

709. We conclude that ECPR is an improper method for setting prices of interconnection and unbundled network elements because the existing retail prices that would be used to compute incremental opportunity costs under ECPR are not cost-based. Moreover, the ECPR does not provide any mechanism for moving prices towards competitive levels; it simply takes prices as given. The record indicates that both incumbents and new entrants agree that retail prices are not based on costs. Incumbents generally argue that local residential retail prices are below costs while new entrants contend that they exceed competitive levels.[1723] In either case, application of ECPR would result in input prices that would be either higher or lower than those which would be generated in a competitive market and would not lead to efficient retail pricing.

710. In markets where retail prices exceed competitive levels, entry would take place if

[1721] 47 U.S.C. § 251(f).

[1722] *See Universal Service* NPRM at para. 32.

[1723] *See, e.g.*, Ameritech comments at 62.

network element prices were set at efficient competitive levels. The ECPR, however, will serve to discourage competition in these very markets because it relies on the prevailing retail price in setting the price which new entrants pay the incumbent for inputs. While ECPR establishes conditions for efficient entry given existing retail prices, as its advocates contend, the ECPR provides no mechanism that will force retail prices to their competitive levels. We do not believe that Congress envisioned a pricing methodology for interconnection and network elelments that would insulate incumbent LECs' retail prices from competition. Instead, Congress specifically determined that input prices should be based on costs because this would foster competition in the retail market. Therefore, we reject the use of ECPR for establishing prices for interconnection and unbundled elements.

711. As discussed above, the record in this docket shows that end user prices are not cost-based. In *Open Video Systems*, in contrast, we did not find that there would be a problem with the determination of end user prices.[1724] We concluded that "[u]se of [an ECPR] approach is appropriate in circumstances where the pricing is applicable [sic] to a new market entrant (the open video system operator) that will face competition from an existing incumbent provider (the incumbent cable operator), as opposed to circumstances where the pricing is used to establish a rate for an essential input service that is charged to a competing new entrant by an incumbent provider."[1725] In addition, in *Open Video Systems*, we concluded that the ECPR is appropriate because it encourages entry for open video system operators and also enhances the availability of carriage for unaffiliated programmers.[1726] The ECPR generally protects the provider's profits and provides opportunities for third parties to use the provider's inputs. The ECPR does not provide a mechanism to drive retail prices to competitive levels, however. In *Open Video Systems*, we wanted to encourage entry by open video system providers and to encourage them to have incentives to open their systems to unaffiliated programmers. Here, our goal is to ensure that competition between providers, including third party providers using interconnection and unbundled elements, will drive prices toward competitive levels and thus use of the ECPR is inappropriate.

712. *Universal Service Subsidies.* We conclude that funding for any universal service mechanisms adopted in the universal service proceeding may not be included in the rates for interconnection, network elements, and access to network elements that are arbitrated by the states under sections 251 and 252. Sections 254(d) and 254(e) of the 1996 Act mandate that universal service support be recovered in an equitable and nondiscriminatory manner from all providers of

[1724] *Implementation of Section 302 of the Telecommunications Act of 1996 -- Open Video Systems*, CS Docket No. 96-46, Second Report and Order, FCC 96-249 (rel. June 3, 1996) (*Open Video Systems*).

[1725] *Id.* at 127.

[1726] *Id.*

telecommunications services.[1727] We conclude that permitting states to include such costs in rates arbitrated under sections 251 and 252 would violate that requirement by requiring carriers to pay specified portions of such costs solely because they are purchasing services and elements under section 251. Section 252(d)(1) requires that rates for interconnection, network elements, and access to network elements reflect the costs of providing those network elements, not the costs of supporting universal service.

713. Section 254(f) provides that a state may adopt equitable, nondiscriminatory, specific, and predictable mechanisms to advance universal service within that state.[1728] If a state collects universal service funding in rates for elements and services pursuant to sections 251 and 252, it will be imposing non-cost based charges in those rates. Including non-cost based charges in the rates for interconnection and unbundled elements is inconsistent with our rules implementing sections 251 and 252 which require that these rates be cost-based. It is also inconsistent with the requirement of section 254(f) that telecommunications carriers contribute to state universal service on a nondiscriminatory basis, because telecommunications carriers requesting interconnection or access to unbundled network elements will be required to make contributions to universal service support through such surcharges.[1729] States may not, therefore, include universal service support funding in the rates for elements and services pursuant to sections 251 and 252, nor may they implement mechanisms that have the same effect. For example, states may not fund universal service support by imposing higher rates for interconnection, unbundled elements, or transport and termination on carriers that offer service to different types of customers or different geographic areas. To the extent that New York's "pay or play" system funds universal service in this manner, it violates sections 251, 252, and 254 of the 1996 Act. Nothing in the 1996 Act or in this Order, however, precludes a state from adopting a universal service funding mechanism, whether interim or otherwise, if such funds are collected in accordance with section 254(f) on an "equitable and nondiscriminatory basis" through "specific, predictable, and sufficient mechanisms that do not rely on or burden Federal universal service support mechanisms."[1730]

714. Our decision here does not exempt carriers purchasing elements or services under section 251 from contributing to (or possibly receiving) universal service support. Rather, the recovery of universal service support costs from telecommunications carriers, including carriers requesting unbundled network elements, will be governed by section 254 of the 1996 Act.

[1727] Joint Explanatory Statement at 131 ("In keeping with the conferees' intent that universal service support should be clearly identified, [section 254(e)] states that such support should be made explicit . . .").

[1728] 47 U.S.C. § 254(f).

[1729] *See infra*, Section VII.D.3., discussing discrimination.

[1730] 47 U.S.C. § 254(f).

Federal universal service support mechanisms will be determined by our decisions reached in CC Docket 96-45, based on the recommendations of the Federal/State Universal Service Joint Board, and states may adopt additional universal service support mechanisms consistent with section 254(f).

715. We are mindful that the requirements of the 1996 Act may be disruptive to existing state universal service support mechanisms during the period commencing with this order and continuing until we complete our universal service proceeding to implement section 254. As discussed in the subsection immediately below, we permit incumbent LECs to continue to recover certain non-cost-based interstate access charge revenues for a limited period of time, largely because of concerns about possible deleterious impacts on universal service. We also authorize incumbent LECs, for a similar limited period of time, to continue to recover explicit intrastate universal service subsidy revenues based on intrastate access charges. This mechanism minimizes any possibility that implementation of sections 251 and 252 will unduly harm universal service during the interim period prior to completion of our universal service and access reform proceedings. Because we conclude this action should adequately provide for the continuation of a portion of existing subsidy flows during a transition period until completion of our proceeding implementing section 254, we decline to permit any additional funding of universal service support through rates for interconnection, unbundled elements, and transport and termination during the interim period.

716. *Interim Application of Access Charges to Purchasers of Unbundled Local Switching Element.* In the introduction of this Order, we emphasize that implementation of section 251 of the 1996 Act is integrally related to both universal service reform as required under section 254, and to reform of the interstate access charge system.[1731] In order to achieve pro-competitive, deregulatory markets for all telecommunications services, we must create a new system of funding universal service that is specific, explicit, predictable, sufficient, and competitively neutral. We also must move access charges to more cost-based and economically efficient levels. We intend to fulfill both of these goals in the coming months, by completing our pending universal service proceeding to implement section 254 by our statutory deadline of May 1997, and by addressing access charge issues in an upcoming access reform proceeding. The 1996 Act, however, requires us to adopt rules implementing section 251 by August 1996. We are concerned that implementation of the requirements of section 251 now, without taking into account the effects of the new rules on our existing access charge and universal service regimes, may have significant, immediate, adverse effects that were neither intended nor foreseen by Congress.

717. Specifically, as we conclude above, the 1996 Act permits telecommunications carriers that purchase access to unbundled network elements from incumbent LECs to use those elements to provide telecommunications services, including the origination and termination of interstate calls. Without further action on our part, section 251 would allow entrants to use those

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[1731] *See supra*, Section I.B.

unbundled network facilities to provide access services to customers they win from incumbent LECs, without having to pay access charges to the incumbent LECs. This result would be consistent with the long term outcome in a competitive market. In the short term, however, while other aspects of our regulatory regime are in the process of being reformed, such a change may have detrimental consequences.

718. The access charge system includes non-cost-based components and elements that at least in part may represent subsidies, such as the carrier common line charge (CCLC) and the transport interconnection charge (TIC). The CCLC recovers part of the allocated interstate costs for incumbent LECs to provide local loops to end users. In the universal service NPRM, we observed that the CCLC may result in higher-volume toll users paying rates that exceed cost, and some customers paying rates that are below cost. We sought comment on whether that subsidy should be continued, and on whether and how it should be restructured.[1732] The nature of most of the revenues recovered through the TIC is unclear and subject to dispute, although a portion of the TIC is associated with certain costs related to particular transport facilities. Although the TIC was not created to subsidize local rates, some parties have argued in the *Transport* proceeding and elsewhere that some portion of the revenues now recovered through the TIC may be misallocated local loop or intrastate costs that operate to support universal service.[1733] In the forthcoming access reform proceeding, we intend to consider the appropriate disposition of the TIC, including the development of cost-based transport rates as directed by the United States Court of Appeals for the District of Columbia Circuit in *Competitive Telecommunications Association v. FCC* (*CompTel v. FCC*).[1734]

719. Without a temporary mechanism such as the one we adopt below, the implementation of section 251 would permit competitive local service providers that also provide interstate long-distance service to avoid totally the CCLC and the TIC, which in part represent contributions toward universal service, by serving their local customers solely through the use of unbundled network elements rather than through resale. We believe that allowing such a result before we have reformed our universal service and access charge regimes would be undesirable as a matter of both economics and policy, because carrier decisions about how to interconnect with incumbent LECs would be driven by regulatory distortions in our access charge rules and our universal service scheme, rather than the unfettered operation of a competitive market. Because

[1732] *Universal Service* NPRM at paras. 113-14.

[1733] *Transport Rate Structure and Pricing*, CC Docket No. 91-213, Report and Order and Further Notice of Proposed Rulemaking, 7 FCC Rcd 7006, 7065-7066 (1992) (*First Transport Order*). *Cf.* Letter from Bruce K. Cox, Government Affairs Director, AT&T, to William F. Caton, Acting Secretary, FCC, September 7, 1995 (filed in CC Docket No. 91-213) (suggesting that TIC revenues not allocable to specific transport facilities may represent misallocated common line costs).

[1734] *Competitive Telecommunications Association v. FCC*, No. 96-1168 (D.C. Cir. July 5, 1996).

of our desire to err on the side of caution where universal service may be implicated, we conclude that some action is needed during the interim period before we complete our access reform and universal service proceedings.

720. We conclude that we should establish a temporary transitional mechanism to help complete all of the steps toward the pro-competitive goal of the 1996 Act, including the implementation of a new, competitively-neutral system to fund universal service and a comprehensive review of our system of interstate access charges. Therefore, for a limited period of time, incumbent LECs may recover from interconnecting carriers the CCLC and a charge equal to 75 percent of the TIC for all interstate minutes traversing the incumbent LECs' local switches for which the interconnecting carriers pay unbundled local switching element charges. Incumbent LECs may recover these charges only until the earliest of: (1) June 30, 1997; (2) the effective date of final decisions by the Commission in both the universal service and access reform proceedings; or (3) if the incumbent LEC is a BOC, the date on which that BOC is authorized under section 271 of the 1996 Act to offer in-region interLATA service. The end date for BOCs that are authorized to offer interLATA service shall apply only to the recovery of access charges in those states in which the BOC is authorized to offer such service.

721. We tentatively concluded in the NPRM that purchasers of unbundled network elements should not be required to pay access charges. We reaffirm our conclusion above in our discussion of unbundled network elements that nothing on the face of sections 251(c)(3) and 252(d)(1) compels telecommunications carriers that use unbundled elements to pay these charges, nor limits these carriers' ability to use unbundled elements to originate or terminate interstate calls, and that payment of rates based on TELRIC plus a reasonable allocation of common costs, pursuant to section 251(d)(1), represents full compensation to the incumbent LEC for use of the network elements that telecommunications carriers purchase. Because of the unique situation described in the preceding paragraphs, however, we conclude, contrary to our proposal in the NPRM, that during a time-limited period, interconnecting carriers should not be able to use unbundled elements to avoid access charges in all cases. As detailed below, this temporary mechanism will apply only to carriers that purchase the local switch as an unbundled network element, and use that element to originate or terminate interstate traffic.[1735] We are applying these transitional charges to the unbundled local switching element, rather than to any other network elements, because such an approach is most closely analogous to the manner in which the CCLC and TIC are recovered in the interstate access regime. Currently, the CCLC and TIC apply to interstate switched access minutes that traverse incumbent LECs' local switches. Applying the CCLC and 75 percent of the TIC to the unbundled local switching element is consistent with our goal of minimizing disruptions while we reform our universal service system and consider changes to our access charge mechanisms. Moreover, the CCLC and the TIC are

[1735] As discussed *infra*, carriers that choose to enter a local market through resale of an incumbent LEC's intrastate local exchange service will pay interstate and intrastate access charges to originate and terminate toll traffic for end user customers that purchase that resold local exchange service.

recovered on a per-minute basis, and the local switch is the primary point at which incumbent LECs are capable of recording interstate minutes for traffic associated with end user customers of requesting carriers.

722. We have crafted this short-term continuation of certain access charge revenue flows to minimize the possibility that incumbent LECs will be able to "double recover" through access charges the facility costs that new entrants have already paid to purchase unbundled elements. For that reason, we do not permit incumbent LECs to assess on purchasers of the unbundled local switching element any interstate access charges other than the CCLC and 75 percent of the TIC. The other access charges are all designed to recover the cost of particular facilities involved in the provision of interstate access services, such as local switching, dedicated interoffice transport circuits, and tandem switching. Imposition of these facility-based access charges in addition to the cost-based charges for comparable network elements established under Section 252 could result in double recovery. The mechanism we establish will ensure that incentives created by non-cost-based elements of access charges do not result in harmful consequences prior to completion of access reform and our universal service proceeding. Imposition of additional access charges is therefore not necessary. We note that this mechanism serves to minimize the potentially disruptive effects of our decisions on incumbent LECs, including small incumbent LECs.[1736]

723. For the same reason, we permit incumbent LECs to recover only 75 percent of the TIC. Some portion of the TIC recovers revenues associated with specific transport facilities. To the extent that these costs can be identified clearly, they should not be imposed on new entrants through the TIC. Incumbent LECs will be fully compensated for any transport facilities that new entrants purchase from them through the unbundled element rates states establish under 252(d)(1), which, as we have stated, must be based on economic cost rather than access charges. In our interim transport rate restructuring, we explicitly set the initial tandem switching rate at 20 percent of the interstate revenue requirement, with the remainder included in the TIC.[1737] In addition, certain costs of upgrading incumbent LEC networks to support SS7 signaling were allocated to transport through then-existing separations procedures. In our interim transport rate restructuring, we did not create any facility-based charges to recover these costs,[1738] so the associated revenues presumably were incorporated into the TIC. There may also be other revenues associated with transport facilities that are recovered today through the TIC. While we are uncertain of the precise magnitude of these revenues, in our best judgment, based on the record in the *Transport* proceeding and other information before us, we find that it is likely that

[1736] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

[1737] *First Transport Order*, 7 FCC Rcd at 7019.

[1738] *First Transport Order*, 7 FCC Rcd at 7019.

these revenues approach, but probabiy do not exceed 25 percent of the TIC for most incumbent LECs. Thus, we believe that 25 percent is a conservative amount to exclude from the TIC to ensure that incumbent LECs do not double recover revenues associated with transport facilities from new entrants. Moreover, the Court in *CompTel v. FCC* remanded our *Transport* decision, in part, because of the inclusion of tandem switching revenues in the TIC rather than in the rate element for tandem switching. We find that excluding 25 percent of the TIC represents a reasonable exercise of our discretion to prevent revenues associated with the tandem switching revenue requirement from being recovered from purchasers or unbundled local switching.

724. We strongly emphasize that these charges will apply to purchasers of the unbundled switching element only for a very limited period, to avoid the possible harms that might arise if we were to ignore the effects on access charges and universal service of implementation of section 251. BOCs shall not be permitted to recover these revenues once they are authorized to offer in-region interLATA service, because at that time the potential loss of access charge revenues faced by a BOC most likely will be able to be offset by new revenues from interLATA services. Moreover, although we do not prejudge the conditions necessary to grant BOC petitions under section 271 to offer in-region interLATA service, we do decide that BOCs should not be able to charge the CCLC and the TIC, which are not based on forward-looking economic costs, to competitors that use unbundled elements under section 251 once they are authorized to provide in-region interLATA service. Only BOCs are subject to special restrictions in the 1996 Act to ensure that their entry into the in-region interLATA market does not have an adverse impact on competition. We conclude that this additional trigger date after which BOCs may not continue to receive access charges from purchasers of unbundled local switching is consistent with this Congressional design.

725. We have selected June 30, 1997 as an ultimate end date for this transitional mechanism to coincide with the effective date for LEC annual access tariffs, and because we believe it is imperative that this transitional requirement be limited in duration. We can conceive of no circumstances under which the requirement that certain entrants pay the CCLC or a portion of the TIC on calls carried over unbundled network elements would be extended further. The fact that access or universal service reform have not been completed by that date would not be a sufficient justification, nor would any actual or asserted harm to the financial status of the incumbent LECs. By June 30, 1997, the industry will have had sufficient time to plan for and adjust to potential revenue shifts that may result from competitive entry. Thus, the economic impact of our decision on competitive local service providers, including those that are small entities, should be minimized.[1739]

726. We believe that we have ample legal authority to implement this temporary transitional measure, and we find that this approach is consistent with the letter and spirit of the 1996 Act. We recognize that the CCLC and TIC have not been developed in accordance with the

[1739] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

pricing standards of section 252(d)(1), and that to comply with the 1996 Act, the rates that states establish for interconnection and unbundled network elements may not include non-cost-based amounts or subsidies. The 1934 and 1996 Acts do, however, give us legal authority to determine, for policy reasons, that users of LEC facilities should pay certain access charges for a period of time.[1740] Section 4(i) of the 1934 Act authorizes the Commission to "perform any and all acts . . . not inconsistent with this Act, as may be necessary in the execution of its functions."[1741] Given the extraordinary upheaval in the industry's structure set in motion by the 1996 Act, and the specific concerns described above, we believe that a temporary mechanism is necessary in order to ensure that the policy goals underlying the access charge system and the Communications Act itself are not undermined. Further, we believe section 251(g) of the 1996 Act lends support to our decision. As discussed above, section 251(g) does not require that incumbent LECs continue to receive access charge revenues when telecommunications carriers use unbundled incumbent LEC network elements to originate and terminate interstate traffic. That section does, however, provide evidence of Congressional recognition of the potential tension between existing interconnection obligations, such as access charges, and the new methods of interconnection mandated by section 251, and therefore supports our decision to create a limited-duration mechanism to address this tension.

727. The decision of the court in *CompTel v. FCC* to remand our decision to adopt the TIC is not inconsistent with this approach. The Court's concern stemmed, in part, from the inclusion of a portion of the interstate tandem switching revenue requirement in the TIC. We have excluded from the charges that purchasers of unbundled local switching must pay a percentage of the TIC that, at a minimum, includes these allocated tandem switching revenues from the transitional charges that incumbent LECs may assess on IXCs.[1742] Furthermore, the Court directed the Commission to develop a cost-based transport rate structure, or to explain why it chose not to do so.[1743] We intend to fulfill this obligation in the forthcoming access reform proceeding. The charge equal to 75 percent of the TIC will be applied only as an interim measure for a brief, clearly-identified period, until that restructuring of access charges is completed. The court expressly acknowledged that the 1996 Act would have implications for the

[1740] *See, e.g., New England Tel. and Tel. Co. v. FCC*, 826 F.2d 1101 (D.C. Cir 1987); *North American Telecommunications Association v. FCC*, 772 F.2d (7th Cir. 1085); *Lincoln Tel. and Tel. Co. v. FCC*, 659 F.2d (D.C. Cir. 1989).

[1741] 47 U.S.C. § 4(i).

[1742] As discussed above, we estimate that the tandem switching, SS7, and other costs associated with transport facilities now recovered through the TIC likely do not exceed 25% of the TIC for most incumbent LECs.

[1743] *Competitive Telecommunications Association v. FCC*, No. 96-1168 at 26-27.

access charge system.[1744] For the reasons described above, we conclude that these effects necessitate temporary application of a portion of the TIC to entrants that win end user customers from LECs, and that purchase the local switch as an unbundled element to originate and terminate interstate and intrastate toll traffic for such end users. In the access reform proceeding, we intend to determine the appropriate disposition for these revenues. Until we have had the opportunity to do so, however, we permit incumbent LECs to recover a transitional charge equal to 75 percent of the TIC under the limited circumstances described herein.

728. The interim mechanism we establish here differs from the waiver relief we have previously granted to NYNEX and Ameritech to permit them to recover certain interstate access charge revenues through "bulk billing" of revenues to all interstate switched access customers.[1745] Those orders responded to waiver requests filed prior to the passage of the 1996 Act. Our responsibility in those proceedings was to determine whether special circumstances existed, and whether the specific relief requested better served the public interest than continued application of our general rules. By constrast, the action we take today addresses industry-wide issues that arise from the new regime put into place by section 251 of the 1996 Act, which allows states to establish unbundled network element rates that recover the full unseparated cost of elements. Our response to the Ameritech and NYNEX waiver petitions does not, simply because those petitions also concerned access charge recovery, constrain our decision in this proceeding.

729. It would be unreasonable to provide such a transitional mechanism on the federal level, but to deny similar authority to the states. Therefore, states may continue existing explicit universal service support mechanisms based on intrastate access charges for an interim period of a similar brief, clearly-defined length. During that period, unless decided otherwise by the state, incumbent LECs may continue to recover such revenues from purchasers of unbundled local switching elements that use those elements to originate or terminate intrastate toll calls for end user customers they win from incumbent LECs. States may terminate these mechanisms at any time. We define mechanisms based on intrastate access charges as those mechanisms that require purchasers of intrastate access services from incumbent LECs to pay non-cost-based charges for those access services on the basis of their intrastate access minutes of use.

730. We do not intend, however, that such a transitional mechanism eviscerate the requirements of sections 252 and 254, which, as we have stated, prohibit funding of universal service subsidies through rates for interconnection and unbundled network elements. Mechanisms

[1744] *Id.* at 12-13.

[1745] *See The NYNEX Tel. Cos. Petition for Waiver, Transition Plan to Preserve Universal Service in a Competitive Environment*, Memorandum Opinion and Order, 10 FCC Rcd 7445 (1995), *reconsideration pending* (*NYNEX USPP Order*); *Ameritech Operating Companies Petition for a Declaratory Ruling and Related Waivers to Establish a New Regulatory Model for the Ameritech Region*, Order, FCC 96-58 (released Feb. 15, 1996) (*Ameritech Customers First Order*).

such as New York's "pay or play" system, which would impose intrastate access charges on non-access services rather than allowing incumbent LECs to recover non-cost-based revenues from purchasers of access services, may not be included in this interim system. Such a result is justified because state "pay or play" mechanisms do not at present constitute a significant revenue stream to incumbent LECs, and therefore elimination of this mechanism is unlikely, in the short term, to have significant detrimental effects on universal service support.

731. These state mechanisms must end on the earlier of: (1) June 30, 1997; or (2) if the incumbent LEC that receives the transitional access charge revenues is a BOC, the date on which that BOC is authorized under section 271 of the 1996 Act to offer in-region interLATA service. With one exception, the analysis provided above as to the rationale for the end dates for the transitional interstate access charge mechanism applies here as well. Because our access reform proceeding focuses on federal charges, and because the full extent of the section 254 universal service mechanism remains to be determined in that proceeding, intrastate access charge-based universal service support mechanisms should not now be required to terminate upon the completion of those proceedings.

732. As with our decision to permit incumbent LECs to continue to receive certain interstate access charge revenues from some purchasers of unbundled local switching for a limited period of time, we believe our decision to allow states to preserve certain intrastate universal service support mechanisms based on access charges is within our authority under section 251(d)(1) of the 1996 Act, and section 4(i) of the 1934 Act. Moreover, although section 251(g) does not directly refer to intrastate access charge mechanisms, it would be incongruous to conclude that Congress was concerned about the effects of potential disruption to the interstate access charge system, but had no such concerns about the effects on analogous intrastate mechanisms.

(c) Fifth Amendment Issues

733. We conclude that our decision that prices for incumbent LECs' unbundled elements and interconnection offerings be based on forward-looking economic cost does not violate the incumbent LECs' rights under the Fifth Amendment of the Constitution. The Supreme Court has recognized that public utilities owned and operated by private investors, even though their assets are employed in the public interest to provide consumers with service, may assert their rights under the Takings Clause of the Fifth Amendment.[1746] In applying the Takings Clause to rate setting for public utilities, the Court has stated that "[t]he guiding principle has been that the Constitution protects utilities from being limited to a charge for their property serving the public

[1746] The Fifth Amendment provides that, "private property [shall not] be taken for public use, without just compensation." U.S. Const. amend. V. *See Duquesne Light Co. v. Barasch*, 488 U.S. 299, 307 (1989) (*Duquesne*).

which is so 'unjust' as to be confiscatory."[1747]

734. The Supreme Court has held that the determination of whether a rate is confiscatory depends on whether that rate is just and reasonable, and not on what methodology is used.[1748] In *Federal Power Comm'n v. Hope Natural Gas Co.*, the Court upheld the Federal Power Commission's order that required the company to make a large reduction in wholesale gas rates. The commission based its determination of a reasonable rate of return on a plant valuation determined by using a historical cost methodology that was only half as large as the company's own valuation based on forward-looking reproduction costs. In its decision, the Court set forth the governing legal standard for determining whether a rate is constitutional:

> Under the statutory standard of "just and reasonable" it is the result reached not the method employed that is controlling. It is not the theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry under the Act is at an end. The fact that the method employed to reach that result may contain infirmities is not then important.[1749]

735. The Court went on to explain that, in determining whether a rate is reasonable, the regulatory body must balance the interests of both the investor and consumer.[1750] "From the investor or company point of view, it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business . . . . [T]he return on the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks."[1751]

736. Under sections 251(c)(2) and (3) of the 1996 Act, incumbent LECs must establish

[1747] *Duquesne*, 488 U.S. at 307 (*citing Covington & Lexington Turnpike Road Co. v. Sandford*, 164 U.S. 578, 597 (1896)).

[1748] *Hope Natural Gas*, 320 U.S. at 602-603; *see also Duquesne; In re Permian Basin Area Rate Cases*, 390 U.S. 747 (1968); *Federal Power Commission v. Memphis Light, Gas & Water Division*, 411 U.S. 458 (1973); *Jersey Central Power & Light v. FERC*, 810 F.2d 1168 (D.C. Cir. 1987).

[1749] *Hope Natural Gas*, 320 U.S. at 602.

[1750] *Id.*

[1751] *Id.* at 603.

rates for interconnection and unbundled elements that are just and reasonable.[1752] In adopting the rules that govern those rates, under *Hope Natural Gas* we must consider whether the end result of incumbent LEC rates is just and reasonable. Incumbent LECs argue that establishing a rate structure that does not permit recovery of historical or embedded costs is confiscatory. We disagree. As stated above, the Court has consistently held since *Hope Natural Gas* that it is the end result, not the method used to achieve that result, that is the issue to be addressed.[1753] Indeed, the Court has found that the "fixing of prices, like other applications of the police power, may reduce the value of the property which is being regulated. But the fact that the value is reduced does not mean that the regulation is invalid."[1754] Moreover, the Court has upheld as reasonable changes in ratemaking methodology when the change resulted in the exclusion of historical costs prudently incurred.[1755] Thus, the mere fact that an incumbent LEC may not be able to set rates that will allow it to recover a particular cost incurred in establishing its regulated network does not, in and of itself, result in confiscation.

737. Moreover, *Hope Natural Gas* requires only that the end result of our overall regulatory framework provides LECs a reasonable opportunity to recover a return on their investment. In other words, incumbent LECs' overall rates must be considered, including the revenues for other services under our jurisdiction.[1756]

738. In this proceeding, we are establishing pricing rules that should produce rates for monopoly elements and services that approximate what the incumbent LECs would be able to charge if there were a competitive market for such offerings. We believe that a forward-looking economic cost methodology enables incumbent LECs to recover a fair return on their investment, *i.e.*, just and reasonable rates. The record does not compel a contrary conclusion. No incumbent LEC has provided persuasive evidence that prices based on a forward-looking economic cost methodology would have a significant impact on its "financial integrity." We further note that at least one federal appellate court has held incremental cost-based pricing

[1752] 47 U.S.C. § 251(c)(2) and (3).

[1753] *See, e.g., Duquesne*, 488 U.S. at 310; *Hope Natural Gas*, 320 U.S. at 602.

[1754] *Hope Natural Gas*, 320 U.S. at 601.

[1755] *Duquesne*, 488 U.S. at 301-302.

[1756] However, we may not consider incumbent LECs' revenue derived from services not under our jurisdiction. *Smith v. Ill. Bell*, 282 U.S. 133 (1930).

constitutional.[1757]

739. Incumbent LECs may seek relief from the Commission's pricing methodology if they provide specific information to show that the pricing methodology, as applied to them, will result in confiscatory rates. We also do not completely foreclose the possibility that incumbent LECs will be afforded an opportunity to recover, to some extent, their embedded costs through a mechanism separate from rates for interconnection and unbundled network elements. As stated above, we intend to explore this issue in detail in our upcoming access reform proceeding.

740. GTE argues that the proper standard to review our ratemaking methodology is the just compensation standard generally reserved for takings of property. This is in effect a contention that the 1996 Act's physical collocation and unbundled network facility requirements constitute physical occupation of their property that should be deemed a taking and that must be subject to "just compensation." Assuming for the sake of argument that the physical collocation and unbundled facilities requirements do result in a taking, we nevertheless find that the ratemaking methodology we have adopted satisfies the just compensation standard. Just compensation is normally measured by the fair market value of the property subject to the taking.[1758] Just compensation is not, however, intended to permit recovery of monopoly rents.[1759] The just and reasonable rate standard of TELRIC plus a reasonable allocation of the joint and common costs of providing network elements that we are adopting attempts to replicate, with respect to bottleneck monopoly elements, the rates that would be charged in a competitive market,[1760] and, we believe, is entirely consistent with the just compensation standard. Indeed, a similar rate methodology based on incremental costs has been found to satisfy the just compensation requirement.[1761] For these reasons, we conclude that, even if the 1996 Act's physical collocation and unbundled network facility requirements constitute a taking, a forward-looking economic cost methodology satisfies the Constitution's just compensation standard.

[1757] *Metropolitan Transp. Auth. v. Interstate Commerce Commission*, 792 F.2d 287, 297 (2d Cir.), *cert. denied*, 479 U.S. 1017 (1986).

[1758] *See, e.g., United States v. Miller*, 317 U.S. 369, 374 (1943) (holding that just compensation can readily be set by ascertaining the property's fair market value, *i.e.*, "what a willing buyer would pay in cash to a willing seller").

[1759] *See, e.g., Lord Mfg. Co. v. United States*, 84 F.Supp. 748, 755-56 (Ct.Cl. 1949), *citing United States v. Cors*, 337 U.S. 325, 334 (1949).

[1760] *Compare Policy and Rules Concerning Rates for Dominant Carriers*, Further Notice of Proposed Rulemaking, CC Docket No. 87-313, 3 FCC Rcd 3195, 3200-01 (1988).

[1761] *Metropolitan Transp. Auth. v. Interstate Commerce Commission*, 792 F.2d at 297.

3. Rate Structure Rules

a. General Rate Structure Rules

(1) Background

741. In addition to applying our economic pricing methodology to determine the rate level of a specific element or interconnection, the state must also determine the appropriate rate structure. We discuss in this section general principles for analyzing rate structure questions, such as in what circumstances charges should be flat-rated or usage sensitive and in what circumstances they should be recurring or non-recurring. These rate structure rules will apply as well if a state sets rates based on default proxies discussed in Section VII.C.2 below, where we also discuss the appropriate rate structure for specific network elements. Network providers incur costs in providing two broad categories of facilities, dedicated and shared. Dedicated facilities are those that are used by a single party -- either an end user or an interconnecting network. Shared facilities are those used by multiple parties. In the NPRM, we proposed that costs should be recovered in a manner that reflects the way they are incurred.[1762] We also sought comment on whether we should require states to provide for recovery of dedicated facility costs on a flat-rated basis, or at a minimum, require LECs to offer a flat-rate option.[1763]

(2) Comments

742. Parties from all sectors of the telecommunications industry agree that costs should be recovered in a manner that reflects the way they are incurred.[1764] Lincoln states that using an approach that varies with capacity, without taking into account the utilization of shared facilities, would not allow small and mid-sized LECs to recover their total costs, because they lack economies of scale and scope.[1765] No commenters take issue with that principle or the principle that the costs of dedicated facilities should be recovered through flat rates. A wide variety of

[1762] NPRM at para. 150.

[1763] *Id.* at para. 152.

[1764] *See, e.g.*, AT&T comments at 67; GSA/DoD comments at 10; Kentucky Commission comments at 5; Lincoln Tel. comments at 17; Sprint comments at 62; Texas Public Utility Counsel comments at 36; USTA comments at 57; LDDS comments at 57; NEXTLINK comments at 30 (generally supporting rate structures that reflect off-peak costs); Washington Commission comments at 24.

[1765] Lincoln Tel. comments at 17.

parties proposed that the Commission adopt such a rule.[1766] BellSouth, however, opposes rigid rate structure rules, and contends they could be detrimental if they preclude alternative structures to which parties are willing to agree.[1767]

(3) Discussion

743. We conclude, as a general rule, that incumbent LECs' rates for interconnection and unbundled elements must recover costs in a manner that reflects the way they are incurred. This will conform to the 1996 Act's requirement that rates be cost-based, ensure requesting carriers have the right incentives to construct and use public network facilities efficiently, and prevent incumbent LECs from inefficiently raising costs in order to deter entry. We note that this conclusion should facilitate competition on a reasonable and efficient basis by all firms in the industry by establishing prices for interconnection and unbundled elements based on costs similar to those incurred by the incumbents, which may be expected to reduce the regulatory burdens and economic impact of our decision for many parties, including both small entities seeking to enter the local exchange markets and small incumbent LECs.[1768] We also adopt some more specific rules that follow from this general rule.

744. First, we require that the charges for dedicated facilities be flat-rated, including, but not limited to, charges for unbundled loops, dedicated transport, interconnection, and collocation. These charges should be assessed for fixed periods, such as a month. We are requiring flat-rated charges for dedicated facilities. Usage-based charges for dedicated facilities would give purchasers of access to network elements an uneconomic incentive to reduce their traffic volumes. Moreover, purchasers of access to network elements with low volumes of traffic would pay below-cost prices, and therefore have an incentive to add lines that they would not add if they had to pay the full cost. As stated in the NPRM, a flat-rated charge is most efficient for dedicated facilities, because it ensures that a customer will pay the full cost of the facility, and no more. It ensures that an entrant will, for example, purchase the exclusive right to use additional loops only if the entrant believes that the benefits of the additional loops will exceed its costs. It also ensures that the entrant will not face an additional (and non-cost-based) usage charge.

745. Second, if we apply our general rule that costs should be recovered in a manner that reflects the way they are incurred, then recurring costs must be recovered through recurring charges, rather than through a nonrecurring charge. A recurring cost is one incurred periodically

[1766] *See, e.g.*, Florida Commission comments at 31; GSA/DoD comments at 10; MFS comments at 61-63; Ohio Consumers' Counsel comments at 30; Telecommunications Resellers Ass'n comments at 42.

[1767] BellSouth comments at 57-58.

[1768] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

over time. A LEC may not recover recurring costs such as income taxes, maintenance expenses, and administrative expenses through a nonrecurring charge because these are costs that are incurred in connection with the asset over time. For example, we determine that maintenance expenses relating to the local loop must be recovered through the recurring loop charge, rather than through a nonrecurring charge imposed upon the entrant.

746. We find that recovering a recurring cost through a nonrecurring charge would be unjust and unreasonable because it is unlikely that incumbent LECs will be able to calculate properly the present value of recurring costs. To calculate properly the present value of recurring costs, an incumbent LEC would have to project accurately the duration, level, and frequency of the recurring costs and estimate properly its overall cost of capital. We find that, in practice, the present value of the recurring costs cannot be calculated with sufficient accuracy to warrant up-front recovery of these costs because incumbent LECs lack sufficient experience with the provision of interconnection and unbundled rate elements. Without sufficient experience, incumbent LECs are unable to project the length of time that an average entrant would interconnect with, or take an unbundled element from, the incumbent LEC, or how expenses associated with interconnection and unbundled rate elements would change over time. In contrast, a recurring charge for a recurring cost would ensure that a customer is only charged for the costs the entrant incurs while that entrant is taking interconnection service or unbundled rate elements from the incumbent LEC. Moreover, when costs associated with the interconnection and particular unbundled rate elements change, the incumbent LEC can make appropriate adjustments to the charges at the time such cost changes occur.

747. Accordingly, we find that imposing nonrecurring charges for recurring costs could pose a barrier to entry because these charges may be excessive, reflecting costs that may (1) not actually occur; (2) be incurred later than predicted; (3) not be incurred for as long as predicted; (4) be incurred at a level that is lower than predicted; (5) be incurred less frequently than predicted; and (6) be discounted to the present using a cost of capital that is too low.

748. Notwithstanding the foregoing, where recurring costs are *de minimis*, we will permit incumbent LECs to recover such costs through nonrecurring charges. We find that recurring costs are *de minimis* where the costs of administering the recurring charge would be excessive in relation to the amount of the recurring costs.

749. Third, states may, but need not, require incumbent LECs in an arbitrated agreement to recover nonrecurring costs, costs that are incurred only once, through recurring charges over a reasonable period of time. The recovery of such nonrecurring costs through recurring charges is a common practice for telecommunications services. Construction of an interconnector's physical collocation cage is an example of a nonrecurring cost. We find that states may, where reasonable, require an incumbent LEC to recover construction costs for an interconnector's physical collocation cage as a recurring charge over a reasonable period of time in lieu of a nonrecurring charge. This arrangement would decrease the size of the entrant's initial capital

outlay, thereby reducing financial barriers to entry. At the same time, any such reasonable arrangement would ensure that incumbent LECs are fully compensated for their nonrecurring costs.

750. We require, however, that state commissions take steps to ensure that incumbent LECs do not recover nonrecurring costs twice and that nonrecurring charges are imposed equitably among entrants. A state commission may, for example, decide to permit incumbent LECs to charge the initial entrants the full amount of costs incurred for shared facilities for physical collocation service, even if future entrants may benefit. A state commission may, however, require subsequent entrants, who take physical collocation service in the same central office and receive benefits as a result of costs for shared facilities, to pay the incumbent LEC for their proportionate share of those costs, less depreciation (if an asset is involved). Under this approach, the state commission could require the incumbent LEC to provide the initial entrants *pro rata* refunds, reflecting the full amount of the charges collected from the subsequent entrants. Alternatively, a state commission may decide to permit incumbent LECs to charge initial entrants a proportionate fraction of the costs incurred, based on a reasonable estimate of the total demand by entrants for the particular interconnection service or unbundled rate elements.

751. In addition, state commissions must ensure that nonrecurring charges imposed by incumbent LECs are equitably allocated among entrants where such charges are imposed on one entrant for the use of an asset and another entrant uses the asset after the first entrant abandons the asset. For example, when an entrant pays a nonrecurring charge for construction of a physical collocation cage and the entrant discontinues occupying the cage before the end of the economic life of the cage, a state commission could require that the initial entrant receive a *pro rata* refund from the incumbent LEC for the undepreciated value of the cage in the event that a subsequent entrant takes physical collocation service and uses the asset. Under this approach, the state commission could require that the subsequent entrant pay the incumbent LEC a nonrecurring charge equal to the remaining unamortized value of the cage and the initial entrant will receive a credit from the incumbent LEC equal to the unamortized value of the cage at the time the subsequent entrant takes service and utilizes the cage.

752. BellSouth's concern that rate structure rules could preclude mutually agreeable alternative structures is misplaced. The rate structure rules we adopt here apply only to rates imposed by the states in arbitration among the parties and to state review of BOC statements of generally available terms. Our rules do not restrict parties from agreeing to alternative rate structures. On the contrary, our intent, following the clear pro-negotiation spirit of the 1996 Act, is for parties to use the backdrop of state arbitrations conducted under our rules, to negotiate more efficient, mutually agreeable arrangements, subject, of course, to the antitrust laws[1769] and to the 1996 Act's requirements that voluntarily negotiated agreements not unreasonably discriminate

[1769] Sherman Antitrust Act, 15 U.S.C. §§ 1 *et seq.*

against third parties.[1770]

b. Additional Rate Structure Rules for Shared Facilities

(1) Background

753. In the NPRM, we stated our belief that the costs of shared facilities should be recovered in a manner that efficiently apportions costs among users that share the facility. The NPRM noted that, for shared facilities, it may be efficient to set prices using any of the following: a usage-sensitive charge; a usage-sensitive charge for peak-time usage and a lower charge for off-peak usage; or a flat charge for the peak capacity that an interconnector wishes to pay for and use as though that portion of the facility were dedicated to the interconnector.[1771]

(2) Comments

754. USTA argues that shared facilities are more reasonably priced on a usage-sensitive basis.[1772] The Florida Commission and Telecommunications Resellers Association both contend that a variety of charges may be appropriate for shared facilities.[1773] Telecommunications Resellers Association further argues that the Commission should "require, where practicable, that LECs offer a flat-rated option with respect to common facilities and bear the burden of justifying instances in which they allege that such an option is not workable."[1774] AT&T makes a similar proposal, arguing that rates should generally be non-usage sensitive except where a usage-based charge is clearly required.[1775] Lincoln Tel. argues that costs of shared facilities should be apportioned among users of the shared facility and that a capacity approach that does not account for utilization of shared facilities would prevent small and mid-sized LECs from recovering their costs as they lack economies of scale.[1776]

[1770] *E.g.*, 47 U.S.C. § 252(e)(2)(A)(i).

[1771] NPRM at para. 151.

[1772] USTA comments at 57; *see also* Lincoln Tel. comments at 17; Sprint comments at 62; NTIA reply at 33-34.

[1773] Florida Commission comments at 31; Telecommunications Resellers Ass'n comments at 42.

[1774] Telecommunications Resellers Ass'n comments at 42.

[1775] AT&T comments at 67.

[1776] *See* Lincoln Tel. comments at 17.

(3) Discussion

755. The costs of shared facilities including, but not limited to, much of local switching, tandem switching, transmission facilities between the end office and the tandem switch, and signaling, should be recovered in a manner that efficiently apportions costs among users. Because the cost of capacity is determined by the volume of traffic that the facilities are able to handle during peak load periods, we believe, as a matter of economic theory, that if usage-sensitive rates are used, then somewhat higher rates should apply to peak period traffic, with lower rates for non-peak usage. The peak load price would be designed to recover at least the cost of the incremental network capacity added to carry peak period traffic. Pricing traffic during peak periods based on the cost of the incremental capacity needed to handle additional traffic would be economically efficient because additional traffic would be placed on the network if and only if the user or interconnecting network is willing to pay the cost of the incremental network capacity required to handle this additional traffic. Such pricing would ensure that a call made during the peak period generates enough revenue to cover the cost of the facilities expansion it requires, and would thus give carriers an incentive to expand and develop the network efficiently. In contrast, off-peak traffic imposes relatively little additional cost because it does not require any incremental capacity to be added to base plant, and consequently, the price for carrying off-peak traffic should be lower.

756. We recognize, however, that there are practical problems associated with a peak-sensitive pricing system. For example, different parts of a given provider's network may experience peak traffic volumes at different times (*e.g.*, business districts may experience their peak period between 10:00 and 11:00 a.m., while suburban areas may have their peak periods between 7:00 and 8:00 p.m.) Moreover, peak periods may change over time. For instance, growth in Internet usage may create new peak periods in the late evening. Further, charging different prices for calls made during different parts of the day may cause some customers to shift their calling to the less expensive time periods, which could shift the peak or create new peaks. Thus, to design an efficient peak-sensitive pricing system requires detailed knowledge of both the structure of costs as well as demand.

757. We conclude that the practical problems associated with peak-sensitive pricing make it inappropriate for us to require states to impose such a rate structure for unbundled local switching or other shared facilities whose costs vary with capacity. Because we believe that such a structure may be the most economically efficient, however, we do not prohibit states from imposing peak-sensitive pricing. We also expect that parties may be able to negotiate agreements with peak/off-peak differences if the benefits of such distinctions are sufficiently high. We conclude that states may use either usage-sensitive rates or flat capacity-based rates for shared facilities, if a state finds that such rates reasonably reflect the costs imposed by the various users. States may consider for guidance rate structures developed in competitive markets for shared facilities. We note that our decisions in this section may benefit small entity entrants in local exchange and exchange access markets by minimizing the extent to which purchasers of

interconnection and unbundled access pay rates that diverge from the costs of those facilities and services.[1777]

c. Geographic/Class-of-Service Averaging

(1) Background

758. In the NPRM, we asked about the appropriate level of aggregation for rates for interconnection and access to unbundled elements. We noted that geographic averaging is simple to administer and prevents unreasonable or unlawful rate differences but, where averaging covers high and low cost areas, it could distort competitors' decisions whether to lease unbundled elements or build their own facilities. We sought comment on the geographic deaveraging of interconnection and unbundled element rates by zone, LATA, or other area.[1778]

759. We also inquired about disaggregation by class of service. We questioned whether business and residential loops, or loops deployed using different technologies should be charged different rates, and how large a differential should be allowed.[1779]

(2) Comments

760. *Geographic Deaveraging.* Commenters generally agreed that rates for interconnection and unbundled elements should be geographically deaveraged where there are significant cost variations.[1780] Many parties assert that there are large geographic variations in the costs of providing these services and elements.[1781] Many commenters argue that rates for interconnection and unbundled elements must be geographically deaveraged in order to meet the

[1777] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

[1778] NPRM at para. 133.

[1779] *Id.*

[1780] *See, e.g.*, Connecticut Commission comments at 13-14; N. Economides comments at 3; Maine Commission, *et al.* comments at 19. *Cf.* Colorado Commission comments at 41; Ohio Consumers' Counsel comments at 27-28 (deaveraging should be left to states); Pennsylvania Commission comments at 31 (noting industry movement towards deaveraging); Texas Commission at 24 (Commission should defer geographic deaveraging and rate rebalancing to universal service proceeding).

[1781] *See, e.g.*, Cincinnati Bell comments at 27; Lincoln Tel. comments at 14; Maine Commission, *et al.* comments at 27-28; Sprint comments at 50-51.

cost-based requirements of sections 251 and 252.[1782] Teleport maintains, however, that most geographic or class-of-service classifications have arisen from marketing or regulatory considerations and have no basis in cost causation.[1783] The Ad Hoc Telecommunications Users Committee fears the "balkanization of [incumbent] LECs' markets" and would only allow geographic deaveraging where incumbent LECs could demonstrate significant regional variation in their non-common costs.[1784] It claims that excessive pricing flexibility would encourage the recovery of common costs to be shifted from competitive markets to less competitive markets.[1785] Finally, MFS would have us require geographic averaging to deter anticompetitive, strategic pricing by incumbent LECs.[1786]

761. *Extent of Deaveraging.* Cincinnati Bell, Lincoln Tel., and MECA would place no limits on the degree of deaveraging that would be permitted.[1787] MCI and Sprint advocate deaveraging based on the population density in specified geographic areas or zones.[1788] AT&T also advocates zone density deaveraging and would have us require at least six zones.[1789] MFS proposes that prices could be averaged over several possible areas, with state-wide averaging being the maximum geographic area. To address concerns that widespread averaging may force low cost areas to subsidize high cost areas, MFS suggests that exchanges be assigned to a small number of cost bands based on access line density, but that rates be set at the state-wide average cost of the exchanges assigned to each zone.[1790] GST generally favors a level of disaggregation that would mitigate incumbent LEC administrative expenses, but would require loop components

[1782] AT&T comments at 60.

[1783] Teleport comments at 48.

[1784] Ad Hoc Telecommunications Users Committee comments at 47.

[1785] *Id.*

[1786] MFS comments at 55-56.

[1787] *See, e.g.*, Cincinnati Bell comments at 27; Lincoln Tel. comments at 14; MECA comments at 46.

[1788] MCI comments at 68; Sprint comments at 50; *see also* MFS comments at 55-57.

[1789] AT&T comments at 67.

[1790] MFS comments at 55-56.

such as drops to be deaveraged and priced at LRIC.[1791]

762. *Opposition to National Rule.* Many state commissions seek flexibility to determine the degree of deaveraging and argue that this issue should be left to the states.[1792] Several favor deaveraging wherever the benefits exceed the administrative costs.[1793] The Connecticut Commission has already allowed SNET to create four cost categories based on density.[1794] The Michigan Commission would deaverage rates for interconnection and access to unbundled elements only where competitive entry warrants such flexibility, subject to a TSLRIC floor constraint.[1795] Michigan Commission further states that there may also be non-competitive situations that warrant rate deaveraging, such as when a service has wide cost variances, when averaging may reduce subscription levels, or when deaveraging could provide more accurate market signals due to cost variation.[1796]

763. *Class-of-Service Deaveraging.* In contrast to the general support by parties for geographic deaveraging, only one party supports class-of-service deaveraging.[1797] That party, the Ohio Consumers' Counsel, argues that permitting intercategory restrictions on unbundled elements would be consistent with intercategory restrictions on resale, such as prohibitions against reselling residential services to business customers, which are permitted under the 1996 Act.[1798] Many parties argue that incumbent LECs should not be able to charge different rates for interconnection or unbundled elements based on the class of service being provided with the elements or the class

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[1791] GST comments at 30.

[1792] *See, e.g.*, Colorado Commission comments at 41; Connecticut Commission comments at 13-14; Maine Commission, *et al.* comments at 19-21; Michigan Commission comments at 15; Texas Commission comments at 24; *see also* Ohio Consumers' Counsel comments at 27-28; California Commission reply at 18.

[1793] *See, e.g.*, Connecticut Commission comments at 13-14; Indiana Commission comments at 24; Mass. Commission comments at 11 n.5.

[1794] Connecticut Commission comments at 13-14.

[1795] Michigan Commission comments at 15-16.

[1796] *Id.*

[1797] Ohio Consumers' Counsel comments at 27-28.

[1798] *Id.*

of customer purchasing or using the interconnection or unbundled elements.[1799] According to most commenters, the 1996 Act's requirement that rates for interconnection and unbundled elements be cost-based generally precludes class-of-service rate differences, unless the costs of provision vary significantly across classes.[1800] Sprint adds that there is no cost justification for rates to differ when unbundled elements are used for business customers instead of residential customers. Sprint also argues that requiring different rates for newer, less-expensive elements would give entrants the incentive to avoid serving customers connected to older, more-expensive plant, which would leave incumbent LECs at systematic cost disadvantages.[1801]

(3) Discussion

764. *Geographic Deaveraging.* The 1996 Act mandates that rates for interconnection and unbundled elements be "based on the cost . . . of providing the interconnection of network elements." [1802] We agree with most parties that deaveraged rates more closely reflect the actual costs of providing interconnection and unbundled elements. Thus, we conclude that rates for interconnection and unbundled elements must be geographically deaveraged.

765. The record reflects that at least two states have implemented geographically-deaveraged rate zones.[1803] These rate zone pricing systems have generally included a minimum of three zones. In the *Expanded Interconnection* proceeding, the Commission also permitted LECs to implement a three zone structure.[1804] We conclude that three zones are presumptively sufficient to reflect geographic cost differences in setting rates for interconnection and unbundled elements, and that states may, but need not, use these existing density-related rate zones. Where such

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[1799] *See, e.g.*, Koch comments at 3; GST comments at 30; Mass. Commission comments at 11; MFS comments at 56-57; Sprint comments at 50; Teleport comments at 48.

[1800] *See, e.g.*, Citizens comments at 18; Mass. Commission comments at 11; MFS comments at 56-57.

[1801] Sprint comments at 51.

[1802] 47 U.S.C. § 252(d)(1)(a)(i).

[1803] Connecticut Commission comments at 13; Illinois Commission comments at Attachment C (Illinois Commerce Commission Order), p.54, 60-61.

[1804] *Expanded Interconnection with Local Telephone Company Facilities and Amendment of the Part 69 Allocation of General Support Facility Costs*, CC Docket Nos. 91-141 and 92-222, Report and Order and Notice of Proposed Rulemaking, 7 FCC Rcd 7369, 7454-57 (1992) (*Expanded Interconnection Order*); Second Report and Order and Third Notice of Proposed Rulemaking, 8 FCC Rcd 7374, 7426-29 (1993). LEC central offices in areas with the highest traffic densities were assigned to Zone 1; offices in areas with intermediate degrees of density were assigned to Zone 2; and offices in areas with the lowest density were assigned to Zone 3.

systems are not in existence, states shall create a minimum of three cost-related rate zones to implement deaveraged rates for interconnection and unbundled elements. A state may establish more than three zones where cost differences in geographic regions are such that it finds that additional zones are needed to adequately reflect the costs of interconnection and access to unbundled elements.

766. *Class-of-Service Deaveraging.* The record leads us to the opposite conclusion for class-of-service deaveraging. Under the 1996 Act, wholesale rates for resold services will be based on retail rates less avoided costs. Rates for interconnection and access to unbundled elements, however, are to be based on costs. We conclude that the pricing standard for interconnection and unbundled elements prohibits deaveraging that is not cost based. Interconnection and unbundled elements are intermediate services provided by incumbent LECs to other telecommunications carriers, and there is no evidence that the cost of providing these intermediate services varies with the class of service the telecommunications carrier is providing to its end-user customers. We conclude that states may not impose class-of-service deaveraging on rates for interconnection and unbundled elements. We disagree with the Ohio Consumers' Counsel's position that the 1996 Act's explicit permission of class-of-service deaveraging of resold services implies that class-of-service deaveraging should be permitted for interconnection and unbundled elements. Finally, we note that these decisions concerning averaging may be expected to lead to increased competition and a more efficient allocation of resources, which should benefit the entire industry, including small entities and small incumbent LECs.[1805]

C. Default Proxy Ceilings and Ranges

767. As previously discussed, we strongly encourage state commissions, as a general rule, to set arbitrated rates for interconnection and access to unbundled network elements pursuant to the forward-looking, economic cost pricing methodology we adopt in this Order. Such rates would approximate levels charged in a competitive market, would be economically efficient, and would be based on the forward-looking, economic cost of providing interconnection and unbundled elements. We recognize, however, that, in some cases, it may not be possible for carriers to prepare, or the state commission to review, economic cost studies within the statutory time frame for arbitration and thus here first address situations in which a state has not approved a cost study. States that do not complete their review of a forward-looking economic cost study within the statutory time periods but must render pricing decisions, will be able to establish interim arbitrated rates based on the proxies we provide in this Order. A proxy approach might provide a faster, administratively simpler, and less costly approach to establishing prices on an interim basis than a detailed forward-looking cost study.

768. The default proxies we establish will, in most cases, serve as presumptive ceilings. States may set prices below those ceilings if the record before them supports a lower price.

[1805] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

States should provide a reasoned basis for selecting a particular default price. In one case, for local switching, the default proxy is a range within which a state may set prices.

769. States that set prices based upon the default proxies must also require the parties to update the prices in the interconnection agreement on a going-forward basis, either after the state conducts or approves an economic study according to the cost-based pricing methodology or pursuant to any revision of the default proxy. We believe generic economic cost models,[1806] in principle, best comport with the preferred economic cost approach described previously, and we intend to examine further such models by the first quarter of 1997 to determine whether any of those models, with any appropriate modifications, could serve as better default proxies. Any updated price would take effect beginning at the time of the completed and approved study or the application of the revised default proxy.

770. Second, if a state has approved or conducted an economic cost study, prior to this Order, that complies with the methodology we adopt in this Order, the state may continue to apply the resulting rate even when not consistent with our default proxies. There must, however, be a factual record, including the cost study, sufficient for purposes of review after notice and opportunity for the affected parties to participate.

771. Finally, while we provide for the use by states of default proxies, we recognize that certain states that are unable to utilize an economic cost study may wish to obtain the benefits of setting rates pursuant to such a study for its residents. The Commission will therefore entertain requests by states to review an economic cost study, to assist the state in conducting or reviewing such a study, or to conduct such a study.

1. Use of Proxies Generally

a. Background

772. In the NPRM, we discussed the possibility of setting certain outside limits for interconnection and unbundled element rates, in particular, by the use of proxies. We invited parties to comment on whether the use of certain proxies to set outer boundaries on the prices for interconnection and unbundled elements would be consistent with the pricing principles of the 1996 Act. Specifically, in the NPRM, we asked parties to comment on the benefits of various types of proxies: (1) generic cost studies, such as the Benchmark Cost Model and the Hatfield models;[1807] (2) some measure of nationally-averaged cost data;[1808] (3) rates in existing

[1806] *See* Section VII.C.3. *infra.*

[1807] NPRM at para. 137; *see infra*, Section VII.C.3, discussing generic cost models.

interconnection and unbundling arrangements between incumbent LECs and other providers of local service, such as neighboring incumbent LECs, CMRS providers, or other entrants in the same service area;[1809] (4) a subset of the incumbent LECs' existing interstate access rates, charged for interconnection with IXCs and other access customers, or an intrastate equivalent;[1810] (5) use of the interstate prices established in the *ONA* proceeding for unbundled features and functions of the local switch as ceilings for the same unbundled elements under section 251;[1811] and (6) any other administratively simple methods for establishing a ceiling for interconnection and unbundled network element rates.[1812] As a counterpart to ceilings, we also sought comment on whether it would be necessary or appropriate for us to establish floors for interconnection and unbundled element prices.[1813]

b. Comments

773. *Proxies Generally.* A number of parties offer general support for the use of cost proxies to establish upper limits on the rates that incumbent LECs may charge for interconnection and unbundled elements.[1814] Ad Hoc Telecommunications Users Committee cautions, however, that using a proxy approach does not eliminate the need for detailed analysis of the cost methodologies and cost inputs upon which the proxy is based.[1815] In addition, USTA contends that the Commission should establish a presumptive framework using targets based on pricing proxies, from which the states would be permitted to depart based on individual circumstances.[1816]

[1808] NPRM at para. 137.

[1809] *Id.* at para. 138.

[1810] *Id.* at paras. 139-140.

[1811] *Id.* at para. 140.

[1812] *Id.* at para. 141.

[1813] *Id.* at para. 143.

[1814] *See, e.g.*, GSA/DoD comments at 8; Cox comments at 31, reply at 30; WinStar comments at 31; NEXTLINK comments at 27-28; Texas Public Utility Counsel Comments at 28-33; NCTA comments at Attachment A (Declaration of Bruce M. Owen), pp.5-6, reply at 18-19; *see also* USTA comments at 50 ("may be a feasible way to establish presumptively valid rates for some unbundled elements").

[1815] Ad Hoc Telecommunications Users Committee comments at 48-49.

[1816] USTA reply at 19, 28; *see also* Washington Commission comments at 27.

774. Incumbent LECs and AT&T generally oppose the use of proxies.[1817] They argue that a national proxy methodology for all network elements is inappropriate because it would not reflect cost-based rates,[1818] may restrict competitive entry,[1819] does not allow for variations among the states,[1820] and is inconsistent with the 1996 Act's mandate of economic costing.[1821] Several commenters contend that the use of proxies could harm small and mid-sized incumbent LECs if such proxies are developed from larger geographic and demographic scales.[1822] In addition, Ameritech opposes the use of proxies for those states that have already adopted cost methodologies and urges the Commission to limit application of such proxies to states that have not yet adopted appropriate cost and pricing methodologies.[1823]

775. *Floors and Ceilings.* Several commenters oppose adoption of a federal floor and ceiling for the rates of interconnection and access to unbundled elements.[1824] They argue generally that such an approach is inferior to a prescription of a specific methodology because it results in rates that are not cost-based and therefore inconsistent with the statute, provides an incentive to incumbent LECs to price inefficiently at the maximum, and removes incentives for

[1817] *See, e.g.*, AT&T comments at 52-53; Bell Atlantic comments at 39; Cincinnati Bell comments at 27; Frontier comments at 22-23; LDDS comments at 65 n.66; Lincoln Tel. comments at 15-16.

[1818] *See, e.g.*, ALTS comments at 37; AT&T comments at 53; NYNEX comments at 53; Lincoln Tel. comments at 15-16; Texas Statewide Telephone Cooperative comments at 14; Rural Tel. Coalition comments at 22; Washington Independent Tel. Ass'n comments at 6.

[1819] *E.g.*, Cincinnati Bell comments at 28; AT&T comments at 53.

[1820] *See, e.g.*, Bell Atlantic comments at 39; Rural Tel. Coalition comments at 22; Wyoming Commission comments at 31; Alaska Commission comments at 2-3.

[1821] *See, e.g.*, ALTS comments at 35; Time Warner comments at 54-55; Washington Independent Tel. Ass'n comments at 6-7; Ohio Commission comments at 50.

[1822] *See, e.g.*, Cincinnati Bell comments at 28; Colorado Independent Tel. Ass'n comments at 4; Illinois Ind. Ass'n comments at 5; Lincoln Tel. comments at 17; Matanuska Tel. comments at 4; Rural Tel. Coalition comments at 22, 28-29; SBA comments at 16; TDS comments at 22.

[1823] Ameritech comments at 61.

[1824] *See, e.g.*, Frontier comments at 22; Lincoln Tel. comments at 14-15; MECA comments at 47; Pennsylvania Commission comments at 31; Telecommunications Resellers Ass'n comments at 41.

upgrading network technology.[1825] Moreover, any such price ceiling would have to be set as high as the reasonable price for the highest cost company or be challenged as confiscatory when higher cost LECs are unable to recover their costs.[1826] In addition, the Texas Public Utility Counsel notes that floors impair the ability of competition to reveal how low costs really are.[1827]

776. Many parties agree, however, that if the Commission establishes pricing guidelines it should use an "outer bounds" pricing approach or require pricing within a zone of reasonableness.[1828] Others support an "outer bounds" if the Commission ensures that states will have sufficient leeway to accommodate state-specific situations,[1829] and the range of reasonableness is not so circumscribed as to reduce the range to the equivalent of a price point.[1830] They argue that establishing separate floors and ceilings enables the Commission to set absolute boundaries that frame the debate with the incumbent LEC concerning relevant costs and prices during negotiations and ultimately arbitration, while giving states flexibility to address state-specific costing issues.[1831] Parties assert that calculation of a perfectly correct, single price is impossible and that cost boundaries allow states to choose an acceptable pricing result with a range of reasonable rates.[1832] Several parties agree that the Commission should establish a presumptive rate ceiling, and that rates exceeding the ceiling should be presumed unlawful.[1833] USTA contends that, if the Commission adopts rate ceilings, such ceilings should indicate levels

[1825] *See, e.g.*, NYNEX comments at 57; Frontier comments at 22-23; Lincoln Tel. comments at 14-15; AT&T comments at 52-53; TDS comments at 22.

[1826] Oregon Commission comments at 29-30; *see also* GVNW comments at 38-39.

[1827] Texas Public Utility Counsel comments at 33.

[1828] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 48; BellSouth comments at 55; Cox comments at 24; GSA/DoD comments at 8; NEXTLINK comments at 27-28; SBC comments at 93; USTA comments at 38; WinStar comments at 31; NCTA reply at 18.

[1829] *See, e.g.*, Kentucky Commission comments at 5; Ohio Consumers' Counsel comments at 29; Puerto Rico Tel. comments at 10-11; Washington Commission comments at 26.

[1830] *See, e.g.*, BellSouth comments at 55.

[1831] *See, e.g.*, GSA/DoD comments at 8; Cox comments at 24, reply at 30-31; NEXTLINK comments at 27-28.

[1832] *See, e.g.*, Rural Tel. Coalition comments at 30.

[1833] *See, e.g.*, ACSI comments at 56; Bell Atlantic comments at 39-40; Cincinnati Bell comments at 27, 30; MCI comments at 60; PacTel comments at 73-74; Texas Public Utility Counsel comments at 28-29.

above which rates must be further justified.[1834] Ameritech maintains that floors should be used only as a benchmark below which rates may not be set in order to guard against cross-subsidization and predatory pricing.[1835]

777. *Generic Cost Models.* Several generic forward-looking cost models were introduced into the record. These are discussed in Section VII.C.3. below.

778. *Nationally-Averaged Costs.* Although a few commenters support the use of nationally-averaged costs as a proxy to establish the rates for interconnection and unbundled network elements,[1836] many more parties oppose the use of such nationally-averaged cost data.[1837] These parties argue that nationally-averaged data ignore geographically divergent factors and the interests of small or rural LECs, do not account for variance of cost between incumbent LECs, and do not reflect the true cost of the service.[1838] No nationally-averaged cost studies were introduced into the record.

779. *Existing Interconnection Agreements.* Generally, commenters oppose the use of rates in existing interconnection agreements as a proxy-based ceiling for interconnection and unbundled element rates.[1839] These parties argue that, because the agreements are the subject of the negotiation between two carriers with their own particular characteristics and needs, such agreements are likely to be inconsistent and not cost-based, may not be based on the pricing standards codified at 252(d), and the services covered by these agreements may not be those that

[1834] USTA comments at 50.

[1835] Ameritech comments at 73; *see also* GSA/DoD comments at 8; Ohio Consumers' Counsel comments at 28; TDS comments at 20.

[1836] *See, e.g.*, MECA comments at 47; PacTel comments at 74; Sprint comments at 55; *see also* ACSI comments at 56.

[1837] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 49-50; Bay Springs, *et al.* comments at 17; Cincinnati Bell comments at 28; Colorado Independent. Tel. Ass'n comments at 4; Florida Commission comments at 29; Illinois Independent Tel. Ass'n comments at 5-6; Lincoln Tel. comments at 15-16; Telecommunications Resellers Ass'n comments at 41.

[1838] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 49; Bay Springs, *et al.* comments at 17; Cincinnati Bell comments at 28; GVNW comments at 31-38.

[1839] *See, e.g.*, ACSI comments at 58; Ad Hoc Telecommunications Users comments at 52; Cincinnati Bell comments at 28-29; Colorado Commission comments at 43; Florida Commission comments at 30; MCI comments at 70; Telecommunications Resellers Ass'n comments at 41.

entrants need to purchase.[1840] A few parties express qualified support for a proxy based on the rates in existing interconnection agreements between incumbent LECs, arguing that such rates have already been scrutinized and determined to be just and reasonable.[1841] WinStar cautions that the Commission should not use the rates contained in the existing interconnection agreements between incumbent LECs and CMRS providers or other new entrants as a proxy ceiling because they were negotiated by parties with unequal bargaining power.[1842]

780. *Interstate Access.* A number of parties support the use of a proxy based on existing interstate access charges, claiming that it is easy to apply, based on cost, and would be self-correcting as the access reform and universal service proceedings remove subsidies from access rates.[1843] ALLTEL further maintains that if access charges are used, there should be no requirement for small and mid-sized LECs to produce cost studies that could hamper their interconnection negotiations.[1844] USTA further argues that such proxies are important to all LECs, but are especially important for rural, small, and mid-sized LECs subject to the two percent waiver process, who should not be subjected to the burden of producing expensive and time-consuming cost studies.[1845] Several parties note that some access charges may need to be adjusted or converted to reflect the characteristics of particular unbundled service offerings.[1846] Others oppose the development of a proxy-based ceiling derived from existing interstate access rates, because access charges are based on historical, rather than economic, costs, and contain

[1840] *See, e.g.,* Ad Hoc Telecommunications Users Committee comments at 52; Florida Commission comments at 30; Telecommunications Resellers Ass'n comments at 41; Time Warner comments at 55.

[1841] *See, e.g.*, Bell Atlantic comments at 39-40; Ohio Consumers' Counsel comments at 28-29; PacTel reply at 34-35; Pennsylvania Commission comments at 31; Texas Commission comments at 24-25; WinStar comments at 32.

[1842] WinStar comments at 34; *see also* Telecommunications Resellers Ass'n comments at 41; ACSI comments at 58.

[1843] *See, e.g.*, ALLTEL comments at 10-11; Bell Atlantic comments at 39-40, 56; BellSouth comments at 56; Cincinnati Bell comments at 29; SBC comments at 94; USTA comments at 54, reply at 28.

[1844] ALLTEL comments at 11.

[1845] USTA reply at 27-28.

[1846] *See, e.g.*, Cincinnati Bell at 30; SBC comments at 95; USTA comments at 54.

inordinate amounts of contribution.[1847] These commenters note that setting rates for other elements that could not be derived from access rates would involve application of different proxies,[1848] and the intrastate and interstate rates associated with common lines are applied in different ways to different categories and classes of customers.[1849] NYNEX argues access charges were designed for a different purpose than interconnection and unbundled elements and therefore would be inappropriate proxies.[1850]

781. In addition, several parties assert that a proxy based on access charges should include all or part of the CCLC or TIC, because otherwise it would be impossible to determine whether an appropriate amount of joint and common costs would be recovered, and IXCs would be able to reconstruct access through unbundled elements priced less than access.[1851] GVNW argues that the TIC is particularly important for small LECs that are not allowed to charge a rate that more accurately reflects their tandem switched transport costs.[1852] On the other hand, several commenters argue that the CCLC and TIC should be excluded,[1853] and WinStar further maintains that, even without those elements, access charge rates would still be too high to serve as a proxy ceiling.[1854]

[1847] *See, e.g.*, ACSI comments at 58; Ad Hoc Telecommunications Users Committee comments at 52-53; Colorado Commission comments at 43; Frontier comments at 23; Lincoln Tel. comments at 15-16; MCI comments at 70; MFS comments at 57 n.66.

[1848] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 52-53.

[1849] *See, e.g.*, NYNEX comments at 59-60.

[1850] NYNEX comments at 58-59.

[1851] *See, e.g.*, Cincinnati Bell comments at 29; NYNEX comments at 59; Texas Commission comments at 25; USTA comments at 51-53.

[1852] GVNW comments at 39.

[1853] *See, e.g.*, Sprint comments at 58; Texas Public Utility Counsel comments at 30-32; WinStar comments at 36-37.

[1854] WinStar comments at 36-37.

c. Discussion

782. We adopt, in the section below, default proxies for particular network elements. We believe that these default proxies generally will result in reasonable price ceilings or price ranges and, for administrative and practical reasons, will be beneficial to the states in conducting initial rate arbitrations, especially in the time period prior to completion of a cost study. The proxies we adopt are designed to approximate prices that will enable competitors to enter the local exchange market swiftly and efficiently and will constrain the incumbent LECs' ability to preclude efficient entry by manipulating the allocation of common costs among services and elements. States that utilize the default proxies we establish to set prices in an arbitration should revise those prices on a going-forward basis when they are able to utilize the preferred economic costing methodology we describe in Section VII.B.2.a. above, or if we subsequently adopt new proxies.[1855]

783. We have considered the economic impact of the adoption of default proxy ceilings and ranges on small entities, including new entrants and small incumbent LECs.[1856] The adoption of proxies for interim arbitrated rates should minimize regulatory burdens on the parties to arbitration, including small entities seeking to enter the local exchange markets and small incumbent LECs, by permitting states to implement the 1996 Act more quickly and facilitating competition on a reasonable and efficient basis by all firms in the industry. We therefore believe that the adoption of default proxy ranges and ceilings advances the pro-competitive goals of the 1996 Act. We also note that certain small incumbent LECs are not subject to our rules under section 251(f)(1) of the 1996 Act, unless otherwise determined by a state commission, and certain other small incumbent LECs may seek relief from their state commissions from our rules under section 251(f)(2) of the 1996 Act.[1857]

784. The proxies that we establish represent the price ceiling or price ranges for the particular element on an averaged basis. In Section VII.B.3.c. above, we required that rates be set on a geographically-deaveraged basis. Consequently, states utilizing the proxies shall set rates such that the average rate for the particular element in a study area does not exceed the applicable proxy ceiling or lie outside the proxy range.

785. We reject the use of rates in interconnection agreements that predate the 1996 Act as a proxy-based ceiling for interconnection and unbundled element rates.[1858] These existing interconnection agreements were not reached in a competitive market environment. Further, such agreements may reflect the divergent bargaining power of the parties to the agreement, various public policy initiatives to advance rural telephone service, or non-monetary *quid pro quos* often found in voluntarily negotiated business arrangements that may be difficult to quantify. There is little basis for us to conclude that rates in these interconnection agreements reflect the forward-looking, incremental cost of interconnection and unbundled network elements. Prices in agreements reached since the 1996 Act are more likely than prior agreements to provide useful information about forward-looking costs, which together with other information may be useful in establishing proxies.

786. In the NPRM, we also raised the issue of using some measure of nationally-averaged cost data as a proxy.[1859] No such study has been submitted into the record in this proceeding.

2. Proxies for Specific Elements

a. Overview

787. Although we encourage states to use an economic cost methodology to set rates for interconnection, unbundled network elements, and collocation, we will permit states unable to analyze an economic costing study within the statutory time constraints to use default proxies in setting and reviewing rates. We set forth below the default proxies for specific network elements. These proxies are interim only. They will apply only until a state sets rates in arbitrations on the basis of an economic cost study, or until we promulgate new proxies based on economic cost models.[1860] We also set forth below the rate structure rules that apply to each of network elements. These rate structure requirements are applicable regardless of whether a state uses an economic cost study or the proxy approach to set rate levels.

[1855] *See infra*, Section VII.C.3., discussing generic cost models.

[1856] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq*.

[1857] 47 U.S.C. § 251(f).

[1858] *See* discussion *supra*, Section III.C., concerning the applicability of section 252 to preexisting agreements.

[1859] NPRM at para. 137.

[1860] *See infra*, Section VII.C.3., discussing generic cost models.

b. Discussion

(1) Loops

(a) Comments

788. A number of commenters assert that unbundled loops, in particular, are dedicated facilities, and therefore should be priced on a flat-rated basis.[1861] Sprint suggests that prices for unbundled loops not depend on minutes of use, but rather distance.[1862] MFS urges the Commission to preempt a Texas statute that, it contends, requires incumbent LECs to price unbundled loops on a usage-sensitive basis.[1863]

(b) Discussion

789. Most loop costs are associated with a single customer.[1864] Outside plant between a customer's premises and ports on incumbent LEC switches is typically either physically separate for each individual customer, or has costs that can easily be apportioned among users. We therefore conclude that costs associated with unbundled loops should be recovered on a flat-rated basis. Usage-based rates for an unbundled loop would most likely translate into usage-based rates for new entrants' retail local customers. A retail usage-based rate would distort incentives for efficient use. Customers that had to pay a usage charge would have an incentive not to use the network in situations where the benefit of using the network exceeds the true cost of using the network. Usage-based loop prices would put an entrant at an artificial cost disadvantage when competing for high-volume customers.[1865]

790. In general, we believe that states should use a TELRIC methodology to establish

[1861] *See, e.g.*, CompTel comments at 36; Florida Commission comments at 31; MFS comments at 62; *see also* AT&T comments at 67; GSA/DoD comments at 10.

[1862] Sprint comments at 62.

[1863] MFS comments at 62.

[1864] *See MTS and WATS Market Structure*, CC Docket No. 78-72, Phase I, Third Report and Order, 93 FCC 2d 241, 291-297 (1983).

[1865] We note that MFS has filed a separate petition asking the Commission to preempt certain provisions of the Texas statute, which it contends requires incumbent LECs to sell unbundled local loops on a usage-sensitive basis. *See* Public Notice, *Petition for Preemption of Local Entry Barriers Pursuant to Section 253*, 11 FCC Rcd 6578 (Com. Car. Bur. 1996) (*MFS Texas Petition*). We will rule specifically on the Texas statute when we consider the *MFS Texas Petition*.

geographically deaveraged, flat-rate charges for access to unbundled loops. As discussed above, however, we recognize that, in some cases, it may not be possible for carriers to prepare, or for state commissions to review, economic cost studies within the statutory time frame for arbitration proceedings. Because reviewing and approving such cost studies takes time and because many states have not yet begun, or have only recently begun, to develop and examine such studies, it is critical for the near-term development of local competition to have proxies that provide an approximation of forward-looking economic costs and can be used by states almost immediately. These proxies would be used by a state commission until it is able either to complete a cost study or to evaluate and adopt the results of a study or studies submitted in the record. In an NPRM to be issued shortly, we will investigate more fully various long-run incremental cost models in the record with an eye to developing a model that can be used to generate proxies for the forward looking economic costs of network elements. Until such time as we can develop such a model, we have developed the following default proxy ceilings that state commissions that have not completed forward looking economic cost studies may use in the interim as an approximation to the forward looking cost of the local loop.

791. State commissions may use this proxy to derive a maximum (or ceiling) loop rate for each incumbent LEC operating within their state, and may establish actual unbundled loop rates at any level less than or equal to this maximum rate in specific arbitrations or other proceedings. Of course, we are encouraging states to have economic studies completed wherever feasible. Moreover, states will have to replace this proxy ceiling with the results of their own forward looking economic cost study or the results produced by a generic economic cost model that the Commission has approved.[1866]

792. We are adopting a proxy ceiling based on two cost models and rates for unbundled loops allowed by six states that had available to them the results of forward-looking economic cost studies at the time they considered either interim or permanent rates for the unbundled loop element. These states are Colorado, Connecticut, Florida, Illinois, Michigan, and Oregon. Each of these states has used a standard that appears to be reasonably close to the forward-looking economic cost methodology that we require to be used, although possibly not consistent in every detail with our TELRIC methodology.[1867] Generally, these states appear to have included an

[1866] *See infra*, Section VII.C.3., discussing generic cost models.

[1867] *See In re: US West Communications, Inc. Filing of Advice Letter No. 2610 In Compliance with Commission Decision No. C96-521 Adopting Emergency Rules (Tariff)*, Docket No. 96S-233T, Decision No. C96-655 (Colorado Commission, June 21, 1996)["*Colorado Decision*"] at 58-64 (interim unbundled loop prices set after review of TSLRIC cost studies); *Re Southern New England Telephone Company*, Order No. 95-06-17, 1995 WL 803837 (Conn. D.P.U.C., December 20, 1995)["*Connecticut Decision*"] at 9-10, 72 (same); *In re: application of City Signal, Inc., for an order establishing and approving interconnection arrangements with Ameritech Michigan*, Case No. U-10647 (Michigan Commission, February 23, 1995) ["*Michigan Decision*"] at 32, 56-57 (setting interim unbundled loop rates based on estimated TSLRIC costs); *In Re: Resolution of petition(s) to*

allocation of forward-looking common costs in their unbundled loop prices. The individual state studies resulted in the following average rates for unbundled local loops: Colorado, $18; Connecticut, $12.95; Florida, $17.28; Illinois, $10.93; Michigan, $10.03; and Oregon, $12.45, computed as set forth below.

793. The Colorado Commission set an interim rate of $18 per month for unbundled loops terminated at the main distribution frame of the LEC switch.[1868] The Connecticut Commission ruled that SNET must provide the following interim unbundled loop prices varying by four zones: metro $10.18; urban $11.33; suburban $15.33; and rural $14.97.[1869] In the absence of further information about customer density or average loop length by zone, we used a simple average equal to $12.95. The Florida Commission set an interim rate for 2-wire loops at $17.00 per month for BellSouth, $15.00 for United/Centel, and $20.00 for GTE.[1870] Using weights equal to the number of loops served by each company in 1994 as reported in the Monitoring Report,[1871] we computed a weighted average price equal to $17.28. Pursuant to its *Customers First* Order, the Illinois Commerce Commission approved tariffs establishing business rates equal to $7.08,

establish nondiscriminatory rates, terms and conditions for resale involving local exchange companies and alternative local exchange companies and alternative local exchanges companies pursuant to Section 364.161, Florida Statutes, Docket No. 950984-TP, Order No. PSC-96-0444-FOF-TP, (Florida Commission, March 29, 1996)["*Florida Decision I*"] at 16 (interim unbundled loop prices set with reference to BellSouth cost studies); *In Re: Resolution of petition(s) to establish nondiscriminatory rates, terms and conditions for resale involving local exchange companies and alternative local exchange companies and alternative local exchanges companies pursuant to Section 364.161, Florida Statutes*, Docket No. 950981-TP, Order No. PSC-96-0811-FOF-TP (Florida Commission, June 24, 1996)["*Florida Decision II*"] at 25-26 (setting rates after review of GTE and United/Centel cost studies); *In re: Investigation into the Cost of Providing Telecommunications Services*, Order No. 96-188, (Oregon Commission, July 19, 1996)["*Oregon Decision*"] at 78 n.61 (interim unbundled loop prices generally based on LRIC estimates plus applicable group related costs, and an additional contribution for recovery of joint and common costs); *Illinois Bell Telephone Company Proposed introduction of a trial of Ameritech's Customers First Plan in Illinois*, Docket Nos. 94-0096/94-0117/94-0146/94-0301 (Illinois Commission, April 7, 1995)["*Customers First* Order"] at 54, 61 (rates set with reference to Ameritech's LRSIC studies).

[1868] *Colorado Decision* at 66.

[1869] *Connecticut Decision* at 74.

[1870] *Florida Decision I* at 19; *Florida Decision II* at 25-26.

[1871] Monitoring Report, CC Docket No. 87-339, May 1996 (listing the following number of loops by company: GTE, 1,909,172; United/Centel, 1,627,314; BellSouth, 5,328,280).

$10.92, and $14.45, and residential rates equal to $4.59, $8.67, and $12.14 in three density zones.[1872] Based on data from Table 2.5, page 20 of the Common Carrier Statistics, 1995 Preliminary, we found a 36 percent - 64 percent business residential split. Using Illinois Commission data for number of households in each density zone (996,750 in zone A; 2,788,759 in zone B; 4,594,567 in zone C), we computed an average loop cost of $10.93. The Michigan Commission approved transitional rates of $8.00 per loop for business and $11 per loop for residence.[1873] Based on Common Carrier Statistics, 1995 Preliminary data, we computed a 32 percent - 68 percent business-residential split in Michigan, which leads to an average rate of $10.03. The Oregon Commission set the rate for a "basic 2-wire loop set" at $11.95 plus $0.50 for a network access channel connection, for a total price of $12.45.[1874]

794. In order to set a proxy ceiling for unbundled loop elements we make use of the two cost models for which nationwide data are available and upon which parties have had the opportunity to comment in this proceeding. These models are the Benchmark Cost Model (*BCM*)[1875] and the *Hatfield 2.2*.[1876] Based on our current information, we believe that both these models are based on detailed engineering and demographic assumptions that vary among states, and that the outputs of these models represent sufficiently reasonable predictions of relative cost differences among states to be used as set forth below to set a proxy ceiling on unbundled loop prices for each state. We do not believe, however, that these model outputs by themselves necessarily represent accurate estimates of the absolute magnitude of loop costs. As we discuss below, further analysis is necessary in order to evaluate fully the procedures and input assumptions that the models use in order to derive cost estimates. Furthermore, in the case of *BCM*, model outputs include costs in addition to the cost of the local loop. In order to correct for these considerations, we have developed a hybrid cost proxy in the following manner. First, we have applied a scaling factor to the cost estimates of each model. This scaling is based on the actual rates computed for unbundled loop elements in the six states referred to above. Specifically we have multiplied the cost estimate produced by each model in each state by a

[1872] *See* Ameritech Tariff, Ill. C.C. No. 20, Part 19, Section 1, issued October 23, 1995.

[1873] *Michigan Decision* at 94.

[1874] *Oregon Decision* at Appendix C, p.1.

[1875] *Benchmark Cost Model: A Joint Submission by MCI Communications, Inc., NYNEX Corporation, Sprint Corporation, U S West, Inc.* (December 1995), submitted by MCI Communications, Inc., NYNEX Corp., Sprint/United Management Corp., U S West, Inc. on July 24, 1996 (*BCM*). For a more detailed discussion of the *BCM*, *see infra*, Section VII.C.3.

[1876] *Hatfield Model, Version 2.2, Release 1*, (Hatfield Associates, Inc., March 1996), submitted by AT&T and MCI on May 16, 1996 (*Hatfield 2.2*); *see also* AT&T reply at Appendix D (Update of the Hatfield Model Version 2.2, Release 1). *See infra*, Section VII.C.3., for a more detailed discussion of the various versions of the *Hatfield* model.

factor equal to the unweighted average of rates adopted by state commissions in the six states, divided by the unweighted average of the model cost estimates for the same six states. Our hybrid cost proxy is computed as the simple average of the scaled cost estimates for the two models in each of the 48 contiguous states and the District of Columbia. Neither *BCM* nor *Hatfield 2.2* provide cost estimates for Alaska and only the *BCM* provides an estimate for Hawaii. Our default loop cost proxies for Hawaii and Puerto Rico are based on the default loop cost proxies of the states that most closely approximate them in population density per square mile.[1877] We are not setting default loop cost proxies in this Order for Alaska or for any of the remaining non-contiguous areas subject to the 1996 Act requirement that incumbent LECs offer unbundled loop elements. We are not establishing default loop cost proxies for these areas because we are unsure that comparisons of the population densities of the continental states and of Alaska and other non-contiguous areas subject to the 1996 Act fully capture differences in loop costs. Regulatory authorities in those areas may seek assistance from this Commission should default loop cost proxies be needed before they have completed their investigations of the forward-looking costs of providing unbundled loop elements. Since our intention is to establish a ceiling for unbundled loop rates, we believe that it is necessary to take account of the variation in the data that we have used for scaling. While the six states that we considered appear to have based their rates on forward-looking economic cost pricing principles, the actual rates that they approved appear to reflect other factors as well. Furthermore, because only a small number of states have conducted such studies, some upward adjustment is warranted as a safety margin to ensure that the ceiling captures the variation in forward-looking economic costing prices on a state-by-state basis. We have therefore chosen to adjust the hybrid cost estimates upward by five percent for each state. A table listing the proxy ceilings on a statewide average basis is contained in Appendix D.

795. A number of parties have opposed the use of either the *Hatfield* model or *BCM*.[1878] Some critics, for example, have argued that the models may lead to inaccurate cost estimates since these estimates assume that a network is built "from scratch."[1879] Others have criticized specific procedures that have been used in the models to estimate both operating expenses and capital costs. As discussed below in Section VII.C.3., we believe that these criticisms may have merit. In a future rulemaking proceeding, we intend to examine in greater detail various forward looking economic cost models. For the purposes of setting an interim proxy, however, we note

[1877] There is a strong (negative) correlation between population density and the loop costs reported by all the cost models. The correlation is significant at the 5% level. Population densities are from The Statistical Abstract of the United States 1995, Table Number 23. For Puerto Rico, land area is from Table 361 and population is from Table 1345.

[1878] For a more detailed discussion of these generic cost models, *see infra*, Section VII.C.3.

[1879] *See, e.g.*, Florida Commission comments at 28-29; USTA comments at 54 n.45; Rural Tel. Coalition reply at 35.

that the criticisms have been directed largely toward the absolute level of cost estimates produced by the models, rather than the relative cost estimates across states. Since our hybrid proxy ceiling explicitly scales the model cost estimates based on existing state decisions and uses the model results simply to compute relative prices, we believe that these criticisms do not apply in the present context.

796. We also note that a third model, the *BCM 2*,[1880] could have been used in the construction of our interim cost proxy by simply taking the scaled cost estimates from three cost models instead of two. We have chosen not to follow this approach since parties have not had an opportunity to comment on the possible deficiencies of the *BCM 2*. For comparison purposes, however, we have computed the corresponding ceiling cost estimates, and have found that the scaled costs using the three model proxy are very similar to the estimated costs that were derived using the two models.[1881]

797. As discussed above, we believe that cost-based rates should be implemented on a geographically deaveraged basis. We allow states to determine the number of density zones within the state, provided that they designate at least three zones, but require that in all cases the weighted average of unbundled loop prices, with weights equal to the number of loops in each zone, should be less than the proxy ceiling set for the statewide average loop cost set forth in Appendix D.

798. As noted above, we have not yet had sufficient time to evaluate fully any of the cost models that have been submitted in the record, and our hybrid proxy is therefore intended to be used only on an interim basis. We believe that the methodology is consistent with forward-looking cost studies, but we also recognize that there may be situations in which forward looking loop costs will differ from computed costs, and accordingly, we have increased the state average loop costs by five percent and established the proxy as a ceiling. We emphasize that use of the hybrid proxy model can be superseded at any time by a full forward looking economic cost study that follows the guidelines set forth in this order. In addition, we are currently in the process of evaluating the more detailed cost models that have been submitted in the record,[1882] and will issue a further notice on the use of these models in the near future.

[1880] *Benchmark Cost Model 2* (July 1996), submitted by Sprint Corp. and U S West, Inc., on July 24, 1996 (*BCM 2*). For a more detailed discussion of this generic cost model, *see infra*, Section VII.C.3.

[1881] The coefficient of correlation is 0.991. Since the models are deterministic, this correlation does not reflect any relevant statistical properties of the models.

[1882] For a more detailed discussion of the cost models submitted in this docket, *see infra*, Section VII.C.3.

(2) Local Switching

(a) Comments

799. Several IXCs propose that local switching rates be part flat-rated and part usage-sensitive. LDDS argues that the price of the unbundled switching element should reflect as closely as possible the manner in which switching costs are incurred. It believes that line-related costs should be recovered through a flat per-line capacity charge, based on a contracted-for number of lines, with an additional usage-based trunking port charge and a combination of per-line and usage-based charges to recover busy hour related costs.[1883] AT&T similarly argues that switching rates should be based on a capacity charge for line-specific costs plus a usage sensitive charge based on calling volume.[1884] MCI states that switching costs are a function of line connections, trunk connections, and busy hour demand on the switch matrix and processor. Hence, the rate for the switching element should have a sub-element price relating to each sub-element, set to recover the associated TSLRIC.[1885] Sprint, on the other hand, contends that the charge for the local switching element should consist of two flat-rated charges, one based on the number of interconnector lines receiving dedicated access to the first point of concentration in the switch, and the second on the number of links between the termination equipment and the switch that an interconnector has ordered to provide it with switching capacity at its desired grade of service.[1886] CompTel argues that trunk port charges should be usage sensitive because trunk ports are used by multiple parties and that the network element for end-office serving wire center (provided by tandem switching) should be priced on a per minute basis.[1887]

800. Time Warner argues that pricing switched-based network elements on a flat-rated basis could give non-facilities-based competitors artificially created cost advantages over those who choose to invest in the development of competing networks.[1888] It also argues that nothing in the 1996 Act suggests that switches should not be priced based on a per-use basis rather than a

[1883] LDDS comments at 57.

[1884] AT&T comments at 68.

[1885] MCI comments at 30.

[1886] Sprint comments at 35, 62.

[1887] CompTel comments at 36, 45.

[1888] Time Warner comments at 59.

per-line or per-partitioned portion of the switch basis.[1889] NEXTLINK supports the use of rate structures that reflect peak and off-peak costs, but notes that the advantage of such structures must be balanced against the disadvantages of complexity and possible disputes that could arise with regard to more complex billing systems.[1890] The Washington Commission notes that the switched access price structure for interexchange access is usage sensitive, but it states that usage-sensitive pricing structures for switched access are inappropriate for local interconnection services in Washington because state law prohibits mandatory measured local service. To the extent that network element costs are driven by peak demand, the Washington Commission states that rates should reflect that tendency. It would prefer to see rate structures that more accurately reflect peak, rather than average demand and has expressed a strong interest in flat-rated port charges. The Washington Commission states that a flat rate based upon cost of providing capacity at peak load is possibly the most economically correct pricing mechanism; off-peak usage then is at virtually zero cost.[1891]

801. LDDS and AT&T argue that there should be no additional charges for vertical features provided by the switch, as the cost of providing those features should already be reflected in the charge for unbundled local switching.[1892] MCI has a similar view, arguing that, because incumbent LECs do not incur the cost of vertical features on a usage basis, custom calling features should be included in the price for unbundled local switching.[1893]

802. Incumbent LECs and Sprint, however, argue that vertical features are retail services offered to end users today, and must be purchased by the competitor under the wholesale rate provision of the 1996 Act.[1894] In making that argument, however, Sprint notes that although it is not technically feasible to unbundle vertical services the costs of such services can be identified and should be excluded from the price of the local switching element.[1895] Bell Atlantic notes that services currently sold at a loss are subsidized by vertical service offerings. It asserts that, if these offerings were treated as unbundled elements that must be provided at cost instead of

[1889] Time Warner comments at 59.

[1890] NEXTLINK comments at 30.

[1891] Washington Commission comments at 29-30.

[1892] AT&T comments at 21 n.22; LDDS comments at 56-57.

[1893] MCI comments at 31.

[1894] *See, e.g.*, SBC comments at 38; Sprint comments at 36-37.

[1895] Sprint comments at 37 n.15.

wholesale retail services, then a serious takings issue would arise.[1896] ALLTEL contends that the Commission should not permit the 1996 Act's resale price standards to be undercut by carriers attempting to mimic LEC networks by assembling unbundled elements obtained at below cost prices.[1897] USTA contends that section 251(c) does not allow carriers to assemble unbundled network elements to reconstruct and provide retail services offered by the incumbent LECs.[1898] The Competition Policy Institute argues in response, that the existence of unbundled network elements should not be presumed to be a substitute for a resold service.[1899] NYNEX argues that a competitor should not be allowed to obtain resold local exchange service and ask for vertical features at cost-based rates. It argues that the two competitive vehicles were intended to meet different strategic needs; they were not intended to provide opportunities for arbitrage.[1900]

803. Several commenters included estimates of the cost for end-office switching. MCI provides an estimate of the cost of end-office switching as calculated by the *Hatfield 2* model.[1901] Using the least cost, most efficient technology available in the market at the time, MCI estimates that the TSLRIC of end-office switching is equal to 0.18 cents ($0.0018) per minute of use.[1902] AT&T provides an updated version of the *Hatfield 2* model, the *Hatfield 2.2*, which treats the incumbent LECs' current wire center locations as "fixed" nodes in a reconstructed network.[1903] Cox reports that the *Hatfield 2.2* model estimates that average TSLRIC of end office switching

[1896] Bell Atlantic reply at Exhibit 2 (Declaration of Richard A. Epstein), p.7.

[1897] ALLTEL reply at 7.

[1898] USTA reply at 8.

[1899] Competition Policy Institute comments at 26.

[1900] NYNEX comments at 30, 36, 39.

[1901] MCI comments at Attachment 1, "The Cost of Basic Network Elements, Theory, Modeling, and Policy Implications," prepared for MCI by Hatfield Assoc., Inc.

[1902] *Id.* at 34; *see also* NCTA comments at Attachment 1 (Declaration of Bruce M. Owen), p. 34-35 (converting the *Hatfield 2* estimate for end-office switching and switch port costs into a per minute rate of 0.26 cents).

[1903] *Hatfield Model, Version 2.2, Release 1*, (Hatfield Associates, Inc., March 1996), submitted by AT&T and MCI on May 16, 1996 (*Hatfield 2.2*); *see also* AT&T reply at Appendix D (Update of the Hatfield Model Version 2.2, Release 1), p.1-3.

for most states clusters around 0.2 cents ($0.002) per minute of use.[1904]

804. GTE criticizes the *Hatfield 2.2* model and its assumptions, arguing that the Hatfield model suffers from serious inaccuracies and produces results that are inconsistent with what can actually be observed.[1905] GTE reports that the Cost Proxy Model, which was submitted by Pacific Telesis,[1906] estimates the average cost of routing traffic through end-office switches is equal to 0.35 cents ($0.0035) per minute of use.[1907]

805. In pleadings filed in the *LEC-CMRS Interconnection* proceeding,[1908] Cox asserts that the average incremental cost of inter-office transport and termination of traffic is 0.2 cents ($0.002) per minute of use.[1909] In the same proceeding, U S West argues that Cox's estimate of 0.2 cents per minute of use ignores the large differential between the costs of terminating calls during peak and off-peak hours.[1910] USTA claims that the average incremental cost of call

[1904] Letter from J.G. Harrington, Dow, Lohnes & Albertson, on behalf of Cox Communications, to William F. Caton, Acting Secretary, FCC, June 20, 1996, in CC Docket No. 95-185, at Tab 2 (Review of Record on LEC Local transport and Termination Costs Finding from LEC Cost Studies), p.3 (*Cox June 20, 1996 Ex Parte*).

[1905] Letter from Whitney Hatch, Assistant Vice President Regulatory Affairs, GTE, to William F. Caton, Acting Secretary, FCC, July 11, 1996 at Attachment 2 (Economic Evaluation of Version 2.2 of the Hatfield Model).

[1906] *The Cost Proxy Model* (INDETEC International, 1996), submitted by Pacific Telesis Group on June 7, 1996 (*CPM*).

[1907] Letter from Whitney Hatch, Assistant Vice President Regulatory Affairs, GTE, to William F. Caton, Acting Secretary, FCC, July 11, 1996 at Attachment 2 (Economic Evaluation of Version 2.2 of the Hatfield Model), pp.16-17.

[1908] *Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, CC Docket No. 95-185, Notice of Proposed Rulemaking, 11 FCC Rcd 5020, 5038 (1996) (*LEC -CMRS Interconnection NPRM*);

[1909] Letter from J.G. Harrington, Dow, Lohnes & Albertson, on behalf of Cox Communications, to William F. Caton, Acting Secretary, FCC, June 20, 1996, in CC Docket No. 95-185 at Tab 2 (Review of Record on LEC Local Transport and Termination Costs Finding from LEC Cost Studies), pp.1-2; *see also* Letter from Robert F. Roche, CTIA, to William F. Caton, Acting Secretary, FCC, December 8, 1995, in CC Docket No. 94-54, (Incremental Cost of Local Usage, Brock Paper No. 3), p.1.

[1910] U S West comments in CC Docket No. 95-185 at Attachment A (A Response to Dr. Gerald Brock), p.13.

termination is 1.3 cents ($0.013) per minute of use.[1911]

806. In response to the *LEC-CMRS Interconnection NPRM*, many commenters assert that the majority of CMRS providers interconnect with incumbent LEC networks at incumbent LECs' tandem offices.[1912] U S West asserts that Cox's estimate of 0.2 cents ($0.002) per minute of use underestimates the actual cost of transporting and terminating traffic, and claims that, using the same data and methodology as Cox, the incremental cost of transporting and terminating traffic through the tandem is approximately three times higher than Cox's estimate.[1913] In the same proceeding, AirTouch, relying on 1994 testimony before the Georgia Commission, asserts that the LRIC of transporting and terminating a call through the tandem equals approximately 0.49 cents ($0.0049) for the first minute of a call and 0.12 cents ($0.0012) for each additional minute of use.[1914] This estimate is based on the presumption that it should cost roughly half as much to complete a call interchanged at a tandem switch as it does to both originate and terminate a call entirely on one network.[1915] Pacific Bell, asserts that the average LRIC for termination of calls under "Feature Group B," which appears to include terminations at tandems switches in addition to end-office terminations, equals 0.62 ($0.0062) cents per minute of use.[1916]

807. State commissions, that have set rates for the transport and termination of traffic, generally set rates for terminations where parties interconnect at either the end office or the tandem office.[1917] The Maryland Commission has set reciprocal and symmetrical rates for the transport and termination of traffic based, among other things, on a rate proposal calculated by a

[1911] USTA comments in CC Docket No. 95-185 at Attachment (Bill and Keep: A Bad Solution to a Non-Problem), pp.9-10.

[1912] *See, e.g.*, U S West comments in CC Docket No. 95-185 at Attachment A (A Response to Dr. Gerald Brock), p.13.

[1913] *Id.*

[1914] AirTouch comments in CC Docket No. 95-185 at 32-33.

[1915] *Id.*

[1916] Pacific Bell comments in CC Docket No. 95-185 at Exhibit B (Statement of Professor Jerry A. Hausman) at p.14.

[1917] *See, e.g.*, Maryland Commission comments at Appendix B (Maryland Commission Order No. 72348, Case No. 8584 Phase II), p.28-32.

staff witness.[1918] In the Maryland proceeding, the actual cost of tandem and end-office switch terminations are considered proprietary and were, therefore, not directly reported, but the staff witness testified that the calculation of direct, shared, and common costs is less than one-half his proposed rate of 0.6 cents ($0.006) per minute of use for terminations routed through the tandem-office switch.[1919] The Maryland Commission ultimately adopted rates of 0.3 cents ($0.003) per minute of use end-office-switch terminations and 0.5 cents ($0.005) per minute of use for terminations at the tandem switch.[1920]

808. The Illinois Commission has adopted a rate equal to 0.5 cents ($0.005) per minute of use for terminations routed directly through end-office switches and 0.75 cents ($0.0075) per minute of use for calls routed through tandem switches.[1921] Illinois's rate includes an element for recovering a "contribution" over and above the long-run service incremental cost of termination.[1922] Illinois arrived at its final rates by identifying the proposed rates that would pass imputation tests.[1923] In Massachusetts, NYNEX testified that the average marginal cost of end-office switching equals 0.129 ($0.00129) cents per minute of use.[1924] Cox reports that the Florida staff, after reviewing local service cost support data filed by GTE and Centel/United, concluded that the sum of the estimated TSLRIC for end-office switching and the LRIC for tandem-office switching and transport equals 0.25 cents ($0.0025) per minute of use.[1925]

809. The peak-period interconnection rates in New York between NYNEX and other facilities-based, full service local exchange providers are set at 0.74 cents ($0.0074) per minute of

[1918] *Id.*

[1919] *Id.* at 29.

[1920] *Id.* at 32.

[1921] Illinois Commission comments at Attachment C (Illinois Commerce Commission Docket No. 94.0096), pp.83-86, 98.

[1922] *Id.*

[1923] *Id.* at 85.

[1924] *See* Mass. Commission comments at Attachment 3 (Testimony of Paula L. Brown, Managing Director, NYNEX Corporation, in Massachusetts Dept. of Pub. Util. Docket No. 93-125, Workpaper 2), June 14, 1993, p.6.

[1925] *Cox June 20, 1996 Ex Parte* at 4 (*citing* Florida Docket No. 950985-TP).

use (end office) and 0.98 cents ($0.0098) per minute of use (tandem).[1926] Off-peak rates are 0.27 cents ($0.0027) (end office) and 0.29 cents ($0.0029) (tandem).[1927] The Michigan Commission has established mutual compensation rates of 1.5 cents ($0.015) per minute of use for calls passing directly through an end-office switch or through tandem office switches.[1928]

(b) Discussion

810. We conclude that a combination of a flat-rated charge for line ports, which are dedicated to a single new entrant, and either a flat-rate or per-minute usage charge for the switching matrix and for trunk ports, which constitute shared facilities, best reflects the way costs for unbundled local switching are incurred and is therefore reasonable. We find that there is an insufficient basis in the record to conclude that we should require two flat rates for unbundled local switching charges as proposed by Sprint.

811. Based on the record in this proceeding and in the *LEC-CMRS Interconnection* proceeding, we conclude that a range between 0.2 cents ($0.002) per minute of use and 0.4 cents ($0.004) per minute of use for unbundled local switching is a reasonable default proxy. In setting this default price range, we consider the range of evidence in the record, and believe that the most credible studies fall at the lower end of this range.[1929] However, so as to minimize disruption for any state that has set a rate only marginally outside this range, we will grandfather any state that has set a rate at 0.5 cents ($0.005) per minute of use or less pending completion of an economic study pursuant to the methodology set forth in this Order.

812. The forward-looking cost studies contained in the record estimate that the average cost of end-office switching ranges from 0.18 cents ($0.0018) per minute of use[1930] to 0.35 cents

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[1926] *Competition, The State Experience* at 81 (compilation of written responses by state commission staffs to questions by FCC staff, compiled by NARUC) (March 8, 1996).

[1927] *Id.*

[1928] Michigan Commission comments at Attachment 1 (State of Michigan, Case No. U-10647, Opinion and Order, February 23, 1995), p.28.

[1929] *See, e.g.*, Maryland Commission comments at Appendix B (Maryland Commission Order No. 72348, Case No. 8548 Phase II), p.28-32; Letter from Robert F. Roche, CTIA, to William F. Caton, Acting Secretary, FCC, December 8, 1995, in CC Docket No. 94-54 (Incremental Cost of Local Usage, Brock Paper No. 3), p.1; *Hatfield Model, Version 2.2, Release 1*, (Hatfield Associates, Inc. March 1996), submitted by AT&T and MCI on May 16, 1996; AT&T reply at Appendix D (Update of the Hatfield Model, Version 2.2, Release 1).

[1930] *See* MCI comments at Attachment 1, "The Cost of Basic Network Elements, Theory, Modeling, and Policy Implications," prepared for MCI by Hatfield Assoc., Inc. p.34.

($0.0035) per minute of use.[1931] Maryland and Florida have adopted rates based on forward-looking economic cost studies that fall within the default price range we are adopting.[1932] NYNEX's estimate of 0.129 cents ($0.00129) per minute of use, in the Massachusetts proceeding, is estimate an estimate of the marginal cost of end-office switching.[1933] As discussed above, we generally expect studies estimating marginal costs to generate estimates that are less than estimates derived from TELRIC-based studies. We, therefore, conclude that 0.2 cents ($0.002) per minute of use is a reasonable lower end of the price range for end-office switching.

813. USTA's estimate of 1.3 cents ($0.013) appears to be an outlier that is significantly higher than the other estimates.[1934] We find that USTA's estimate does not represent an appropriate cost model for termination of traffic. USTA's estimate is based on the high end of a set of econometric estimates of LEC-reported cost data rather than an independent cost estimate, and USTA gives no explanation of why we should regard this as the best estimate. In addition, USTA's figure is derived, at least in part, from studies that attempt to measure the incremental cost of end-to-end use of the network for local calls, not the cost of local switching. Pacific Bell's study of the average LRIC of a call terminating under "Feature Group B"[1935] apparently includes terminations at tandem switches in addition to end-office terminations.

814. Michigan and Illinois have adopted rates for transport and termination of traffic that are higher than the default price range we adopt for end-office switching.[1936] Michigan, which established mutual compensation rates of 1.5 cents ($0.015) per minute of use, did not review a

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[1931] Letter from Whitney Hatch, Assistant Vice President Regulatory Affairs, GTE, to William F. Caton, Acting Secretary, FCC, July 11, 1996 at Attachment 2 (Economic Evaluation of Version 2.2 of the Hatfield Model), pp.16-17.

[1932] *See* Maryland Commission comments at Appendix B (Maryland Commission Order No. 72348, Case No. 8584 Phase II), pp.28-32; *Cox June 20, 1996 Ex Parte* at 4.

[1933] *See* Mass. Commission comments at Attachment 3 (Testimony of Paula L. Brown, Managing Director, NYNEX Corporation, in Massachusetts Dept. of Pub. Util. Docket No. 93-125, Workpaper 2), p.6.

[1934] USTA comments in CC Docket No. 95-185 at Attachment (Bill and Keep: A Bad Solution to a Non-Problem), pp.9-10.

[1935] Pacific Bell comments in CC Docket No. 95-185 at Exhibit B (Submission of Jerry A. Hausman), para. 32.

[1936] Michigan Commission comments at Attachment 1 (State of Michigan, Case No. U-10647, Opinion and Order, February 23, 1995), p.28; Illinois Commission comments at Attachment C (Illinois Commerce Commission Docket No. 94.0096), pp.83-86, 98.

forward-looking cost study.[1937] Illinois's 0.5 cents ($0.005) per minute rate for termination through the end office is just outside the range we are establishing. First, as previously stated, we are grandfathering rates of 0.5 cents ($0.005) per minute or lower. Further, we do not believe Illinois's rate overrides the weight of evidence in the record, which supports the range we are establishing.

815. States that do not calculate the rate for the unbundled local switching element pursuant to a forward-looking economic cost study may, in the interim, set the rate so that the sum of the flat-rated charge for line ports and the product of the projected minutes of use per port and the usage-sensitive charges for switching and trunk ports, all divided by the projected minutes of use, does not exceed 0.4 cents ($0.004) per minute of use and is not lower than 0.2 cents ($0.002) per minute of use. A state may impose a rate for unbundled local switching that is outside this range if it finds that a forward-looking economic cost study shows a higher or lower rate is justified. States that use our proxy and impose flat-rated charges for unbundled local switching should set rates so that the price falls within the range of 0.2 cents ($0.002) per minute of use and 0.4 cents ($0.004) per minute of use if converted through use of a geographically disaggregated average usage factor. A default price range of 0.2 cents ($0.002) per minute of use and 0.4 cents ($0.004) per minute of use should allow carriers the opportunity to recover fully their additional cost of terminating a call including, according to Maryland's study, a reasonable allocation of common costs. We observe that the most credible studies in the record before us fall at the lower end of this range and we encourage states to consider such evidence in their analysis.

816. With respect to the argument that vertical features should be priced pursuant to the resale price standards, we concluded earlier that vertical features are part of the unbundled local switching element, because they are provided through the operation of hardware and software comprising the "facility" that is the switch.[1938] Accordingly, the pricing standard in 252(d)(1) applies to vertical features as part of the functionality of the switch. As previously discussed, allowing new entrants to purchase switching and vertical features as part of the local switching network element is an integral part of a separate option Congress has provided for new entrants to compete against incumbent LECs.[1939]

[1937] Michigan Commission comments at Attachment 1 (State of Michigan, Case No. U-10647, Opinion and Order, February 23, 1995), p.28.

[1938] *See supra*, Section V.J., discussing unbundled local switching.

[1939] "[I]t is unlikely that competitors will have a fully redundant network in place when they initially offer local service, because the investment necessary is so significant. Some facilities and capabilities . . . will likely need to be obtained from the incumbent [LEC] as network elements pursuant to new section 251." Joint Explanatory Statement at 148.

817. The 1996 Act establishes different pricing standards for these two options available to new entrants -- resale of services pursuant to section 251(c)(4) and unbundled elements pursuant to section 251(c)(3). Where the new entrant purchases vertical features as part of its purchase of an unbundled local switching element, the price of that element, including associated vertical features, should be determined according to section 252(d)(1). The availability of vertical services as part of a wholesale service offering is distinct from their availability as part of the local switching network element. In these circumstances, allowing the new entrant to combine unbundled elements with wholesale services is an option that is not necessary to permit the new entrant to enter the local market.

818. As to Bell Atlantic's takings argument, we concluded above that the pricing of unbundled elements according to the just and reasonable standard in section 251(c)(2) and (c)(3), and applied in section 252(d)(1), is not an unconstitutional taking.[1940] That analysis, which looks at the overall rates established by our regulations, applies with equal force to the pricing of unbundled local switching, inclusive of associated vertical features. A forward-looking economic cost methodology enables incumbent LECs to recover a fair return on their investments and Bell Atlantic has provided no specific evidence to the contrary. We conclude that our pricing methodology for unbundled local switching, inclusive of associated vertical features, provides just compensation to incumbent LECs.

(3) Other Elements

(a) Comments

819. AT&T argues that charges for common transport should be usage sensitive, and that signaling links, signal transfer point, and service control point should be priced using a combination of flat-rated capacity charges and usage-sensitive charges.[1941] The Ohio Consumers' Counsel agrees with AT&T about the principles of rate structure, but argues that the specific prescriptions for rate structure proposed by AT&T are unnecessary if the principles are adopted.[1942] Sprint asserts that common transport rates should be per-minute charges that vary with distance.[1943] MCI argues that trunk connection costs should be recovered through a minute-

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[1940] *See supra*, Section VII.B.2.a.(3)(c).

[1941] AT&T comments at 68.

[1942] Ohio Consumers' Counsel reply at 16.

[1943] Sprint comments at 63.

of-use charge.[1944] AT&T argues that dedicated transport rates should be non-usage sensitive.[1945]

(b) Discussion

820. The primary categories of network elements identified in this Order, other than loops and switching, are transport, signaling, and collocation. Our rule that dedicated facilities shall be priced on a flat-rated basis[1946] applies to dedicated transmission links because these facilities are dedicated to the use of a specific customer.

821. For dedicated transmission links, states must use existing rates for interstate dedicated switched transport as a default proxy ceiling. We believe these rates are currently at or close to economic cost levels. Such rates were set based on interstate special access rates, which we found based on the record in the *Transport* proceeding were relatively close to costs.[1947] These interstate access rates originally were based on incumbent LEC accounting costs, rather than a forward-looking economic cost model. Since 1991, however, incumbent LEC interstate access rates have been subject to price cap regulation, and have therefore been disengaged from embedded costs.[1948]

822. Typically, transmission facilities between tandem switches and end offices are shared facilities. Pursuant to our rate structure guidelines, states may establish usage-sensitive or flat-rate charges to recover those costs. For shared transmission facilities between tandem switches and end offices, states may use as a default proxy ceiling the rate derived from the incumbent LEC's interstate direct trunked transport rates in the same manner that we derive presumptive price caps for tandem switched transport under our interstate price cap rules, using the same

[1944] MCI comments at 30.

[1945] AT&T comments at 67.

[1946] *See supra*, Section VII.B.3.

[1947] *First Transport Order*, 7 FCC Rcd at 7028 (1992); *Transport Rate Structure and Pricing*, CC Docket No. 91-213, Third Memorandum Opinion and Order on Reconsideration and Supplemental Notice of Proposed Rulemaking, 10 FCC Rcd 3030, 3038-39 (1994).

[1948] Interstate access rates for dedicated transport vary by region, type of circuit, mileage, and other factors. For example, BellSouth's entrance facility charge, for transport from an IXC's point of presence to a BellSouth serving wire center, is $134 monthly per DS1 circuit ($5.58 per derived voice grade circuit) and $2,100 monthly per DS3 circuit ($3.13 per derived voice grade circuit). Dedicated transport for 10 miles of interoffice transmission between a serving wire center and an end office is $325 monthly per DS1 circuit ($13.54 per derived voice grade circuit) and $2,950 monthly per DS3 circuit ($4.39 per derived voice grade circuit). Installation, multiplexing, and other transport-related charges may also apply.

weighting and loading factors.[1949] We conclude above that interstate direct-trunked transport rates provide a reasonable default proxy ceiling for unbundled dedicated transport rates. When we restructured the incumbent LECs' interstate transport rates to be more closely aligned with cost, we derived presumptive tandem-switched transmission rate levels from direct-trunked transport rates.[1950] This proxy ceiling for shared transmission facilities between tandem switches and end offices, therefore, should be similarly derived.

823. The United States Court of Appeals for the District of Columbia Circuit recently remanded our interim transport rules.[1951] The court concluded that the Commission had not provided sufficient justification for its method of establishing the rate level of the interstate switched access rate element for tandem switching.[1952] We do not believe, however, that the *CompTel v. FCC* decision is inconsistent with the rules we establish here because the decision did not address or criticize the Commission's determination of the rates for dedicated transport or tandem-switched transport links. Because our proxies do not involve the interstate access rate for tandem switching, they are not inconsistent with the court's analysis.

824. Tandem switching also employs shared facilities. States may, therefore, establish usage-sensitive charges to recover tandem-switching costs. For those states that cannot complete a forward-looking economic cost study within the arbitration period or cannot devote the necessary resources to such a review, we establish a default rate ceiling of 0.15 cents ($0.0015) per minute of use. The additional cost of termination at a tandem in comparison to termination at an end office consists of the cost of tandem switching and the cost of tandem-switched transport transmission. Illinois and Maryland have adopted rates for the transport and termination of traffic from the tandem switch that are, respectively, 0.25 cents ($0.0025) per minute of use and 0.2

[1949] Specifically, when the transport rate restructure was implemented, the initial levels of tandem-switched transmission rates were presumed reasonable if they were based on a weighted per-minute equivalent of direct-trunked transport DS1 and DS3 rates that reflects the relative number of DS1 and DS3 circuits used in the tandem to end office links, calculated using a loading factor of 9000 minutes per month per voice-grade circuit. 47 C.F.R. § 69.111.

[1950] *First Transport Order*, 7 FCC Rcd at 7018-19. Interstate access rates for tandem-switched transport vary by region and mileage. The average charge by RBOCs in Density Zone 1 for transport termination and one mile of switched common transport facility between a tandem switching office and end office equals 0.033 cents ($0.000331) per minute. For a five-mile facility, the average charge is 0.048 cents ($0.000479) per minute; for a ten-mile facility, 0.066 cents ($0.000664) per minute.

[1951] *Competitive Telecommunications Ass'n v. FCC*, No. 95-1168 (D.C. Cir. April 28, 1996).

[1952] The court accepted both AT&T's claim that the Commission had not justified the allocation of 80 percent of the tandem revenue requirement to the TIC and only 20 percent to the tandem element, and CompTel's argument that the Commission had not justified its allocation of overheads to the tandem element.

cents ($0.002) per minute of use, higher than rates for termination at end office switches.[1953] In both instances, our default rate ceiling for tandem switching constitutes at least 60 percent of the implicit tandem switching and transport to the end office switch. We, therefore, find the default rate ceiling we adopt for tandem switching to be consistent with both Illinois's and Maryland's adopted rates for transport and switching of traffic from the tandem office. States that use our proxy and impose flat-rated charges for tandem switching should set rates so that the price does not exceed 0.15 cents ($0.0015) per minute of use if converted through use of a geographically disaggregated usage factor.

825. Rates for signaling and database services should be usage-sensitive, based either on the number of queries or the number of messages, with the exception of the dedicated circuits known as signaling links, which should be charged on a flat-rated basis. Usage charges of this type appear to reflect most accurately the underlying costs of these services.[1954] Interstate access rates for most of these elements have been justified using the price caps new services test, which roughly approximates the results of a forward-looking economic cost study.[1955] In addition, the costs of these services were forward-looking, in that the services were completely new and hence, by definition, used the best-available technology. Thus, we establish as a default proxy ceiling for these elements corresponding interstate access charges for these elements.[1956] For elements that have not been subject to the new services test, states may establish proxy ceilings by identifying the direct costs of providing the element and adding a reasonable allocation of joint and common costs. Because we expect that the joint and common costs associated with the forward-looking cost of network elements are substantially less than those associated with

[1953] Illinois Commission comments at Attachment C (Illinois Commerce Commission Docket No. 94.0096), pp.83-86, 98; Maryland Commission comments at Appendix B (Maryland Commission Order No. 72348, Case No. 8548 Phase II), pp.28-32.

[1954] *Ameritech Operating Companies Petition for Waiver of Part 69 of the Commission's Rules to Establish Unbundled Rate Elements for SS7 Signalling*, DA 96-446, Order, at para. 31 (Com. Car. Bur., rel. Mar. 27, 1996).

[1955] *Amendments of Part 69 of the Commission's Rules Relating to the Creation of Access Charge supplements for Open Network Architecture*, CC Docket Nos. 89-79 and 87-313, Report and Order, Order on Reconsideration, and Supplemental Notice of Proposed Rulemaking, 6 FCC Rcd 4524, 4531 (1991); *modified on recon.*, 7 FCC Rcd 5235 (1992); *Open Network Architecture Tariffs of Bell Operating Companies*, CC Docket No. 92-91, Order, 9 FCC Rcd 440, 454-456 (1993).

[1956] Interstate database services consist of Line Information Database (LIDB) and 800 Database. Deployment of SS7 (out-of-band signaling) has enabled LECs to offer these services. The average charge for RBOCs for LIDB in Density Zone 1 equals 3.34 cents ($0.034) per database query.

traditional service-based costs,[1957] allowing a reasonable allocation is sufficient to protect against possible anticompetitive pricing. Absent any proxy, this approach will provide the most reasonable approximation of forward-looking economic cost.

826. We have established rate structure rules for collocation elements in connection with our *Expanded Interconnection* proceeding.[1958] Many collocation elements established under section 251(c)(6) are likely to represent the same facilities, and should have the same cost characteristics, as existing interstate expanded interconnection services, and therefore we require states to use the same rate structure rules for those collocation elements that we established in the *Expanded Interconnection* proceeding. As a proxy ceiling, states may use the rates the LEC has in effect in its federal expanded interconnection tariff for the equivalent services. Expanded interconnection services are subject to the new services test, which, as discussed above, uses a forward-looking methodology. Although LECs have filed expanded interconnection tariffs, we have not yet completed our investigation into those tariffs. Any price for unbundled collocation elements set based on LEC expanded interconnection tariffs would therefore be subject to any modification of those tariffs that results from our pending investigation, and any state-imposed prices based on those tariffs will need to be adjusted accordingly.

827. We find it unnecessary to specify rate structures for other unbundled elements. The states shall make those determinations by applying our general rate structure principles described above. In the absence of an acceptable forward-looking cost study, states may establish default proxy ceilings for other unbundled elements by identifying the direct costs of providing the element and adding a reasonable allocation of joint and common costs.

[1957] *See supra*, Section VII.B.2.a.

[1958] *Expanded Interconnection with Local Telephone Company Facilities*, CC Docket No. 91-141, 9 FCC Rcd 5154, 5186 (1994).

3. Forward-Looking Cost Model Proxies

a. Background and Comments

828. In the NPRM, we sought comment on the use of certain generic cost studies. Commenters discussed several such models. These models include: 1) the *Hatfield 2*;[1959] 2) the *Hatfield 2.2*;[1960] 3) the *BCM*;[1961] 4) the *BCM 2*;[1962] and 5) the *CPM*.[1963]

829. *Generic Cost Models.* Several generic forward-looking costing models were introduced into the record. Several commenters, supporting the use of generic cost models to establish the rates that incumbent LECs may charge for interconnection and unbundled elements, claim that such an approach would result in ceilings that are efficient, objective, and based on non-proprietary inputs.[1964] On the other hand, certain commenters argue that generic cost models should not be used as proxies because they fail to reflect the possible differences in costs among states, and among carriers, due to technical, demographic, and geographic factors.[1965] In addition, many parties also discussed the use of proxies as direct substitutes for the prices of interconnection and unbundled network element rates.[1966]

[1959] *The Cost of Basic Network Elements: Theory, Modeling, and Policy Implications* (Hatfield Associates, Inc., March 1996), submitted by MCI on March 29, 1996 (*Hatfield 2*).

[1960] *Hatfield Model, Version 2.2, Release 1*, (Hatfield Associates, Inc., March 1996), submitted by AT&T and MCI on May 16, 1996 (*Hatfield 2.2*); *see also* AT&T reply at Appendix D (Update of the Hatfield Model Version 2.2, Release 1).

[1961] *Benchmark Cost Model: A Joint Submission by MCI Communications, Inc., NYNEX Corporation, Sprint Corporation, U S West, Inc.* (December 1995), submitted by MCI Communications, Inc., NYNEX Corp., Sprint/United Management Corp., U S West, Inc. on July 24, 1996 (*BCM*).

[1962] *Benchmark Cost Model 2* (July 1996), submitted by Sprint Corp. and U S West, Inc., on July 24, 1996 (*BCM 2*).

[1963] *The Cost Proxy Model* (INDETEC International, 1996), submitted by Pacific Telesis Group on June 7, 1996 (*CPM*).

[1964] *See, e.g.*, Ad Hoc Telecommunications Users Committee comments at 50; PacTel comments at 76; Ohio Consumers' Counsel comments at 28-29.

[1965] *See, e.g.*, Bay Springs, *et al.* comments at 16-17; Cincinnati Bell comments at 28; Florida Commission comments at 30; Telecommunications Resellers Ass'n comments at 41; California Commission reply at 19.

[1966] *See, e.g.*, AT&T comments at 53.

830. *The Hatfield Models.*[1967] Parties also commented on the particular generic cost models placed on the record in this proceeding, and several support the use of a version of the *Hatfield* model.[1968] These parties argue that the *Hatfield* model represents the only comprehensive nationwide analysis of virtually all network elements on a highly disaggregated basis and is the ideal standard for the Commission to adopt because it will provide immediate certainty on pricing.[1969] Other commenters oppose the application of a version of the *Hatfield* model,[1970] asserting that it may not accurately reflect an incumbent LEC's decisionmaking process for determining the economic and technical feasibility of interconnection because it assumes building "from scratch," an assumption potentially leading to inaccuracy.[1971] Critics of the various *Hatfield* models also argue that they results in below-cost rates for services,[1972] do not capture embedded costs,[1973] and employ a nationwide industry average for costs when costs should be based on the particular carrier's costs.[1974]

831. GTE argues that the *Hatfield 2.2* model's assumptions and analytic practices result in an understatement of cost per loop of about $8.00.[1975] GTE criticizes the assumption that all traffic carried by LECs will be served by a brand new entrant that instantly materializes. GTE indicates that such an assumption would not produce results that are representative of incumbent

[1967] We note that many parties did not address their comments to a particular version of the *Hatfield* model. In such cases, we will refer generally to the *Hatfield* model.

[1968] *See, e.g.*, ACSI comments at 56; AT&T comments at 53 (commenting on *Hatfield 2.2*); MCI comments at 68-69 (commenting on *Hatfield 2*); NEXTLINK comments at 27-28; Washington Commission comments at 27.

[1969] *See, e.g.*, MCI comments at 69 (commenting on *Hatfield 2*).

[1970] *See, e.g.*, PacTel comments at 74-76, reply at 30 (commenting on *Hatfield 2.2*); Ohio Consumers' Counsel comments at 29 n.10; USTA comments at 54 n.45; Sprint reply at 31-32; Rural Tel. Coalition reply at 35.

[1971] *See, e.g.*, Florida Commission comments at 28-29; Lincoln Tel. reply at 6; Rural Tel. Coalition reply at 35; USTA comments at 47-48, 54 n.45.

[1972] *See, e.g.*, Lincoln Tel. reply at 6; U S West comments 20-22.

[1973] *See, e.g.*, USTA comments at 54 n.45; Rural Tel. Coalition reply at 35; PacTel reply at 30 (commenting on *Hatfield 2.2*).

[1974] *See, e.g.*, GVNW reply at 12-13; Lincoln Tel. reply at 6; Sprint reply at 28-32.

[1975] Letter from Whitney Hatch, Assistant Vice President Regulatory Affairs, GTE, to William F. Caton, Acting Secretary, FCC, July 11, 1996 at Attachment 2 (Economic Evaluation of Version 2.2 of the Hatfield Model).

LEC costs when providing services and unbundled elements. GTE argues that the *Hatfield 2.2* model's use of multiplicative factors to calculate installation costs produces inaccuracies, to the extent that the basis of these factors depart from historical relationships. In addition, GTE asserts that the equipment prices used in the *Hatfield 2.2* model are consistently lower than prices paid by LECs. Moreover, GTE asserts that the capital cost and depreciation rates of the *Hatfield 2.2* model do not reflect costs of capital and depreciation rates that will prevail under competitive conditions.[1976] Finally, it asserts that the *Hatfield 2.2* model uses unrealistically high fill factors (the percentage of capacity used), which results in an understatement of investment and, hence, annualized cost.[1977]

832. *The Benchmark Cost Models.*[1978] Although some parties support the use of the *BCM* to set rates for interconnection and unbundled elements,[1979] many other parties oppose its use for this purpose.[1980] Several commenters argue that, because the *BCM* was designed to identify only high cost areas, its assumptions are flawed and will fail to reflect small and rural LECs' network characteristics.[1981] NYNEX argues that the *BCM* is based on a limited set of assumptions about the costs that affect loops.[1982] Commenters further contend that the *BCM* is not technology neutral,[1983] is not designed to estimate the costs of serving business customers,[1984] assumes one

[1976] *Id.* at 13-16.

[1977] *Id.* at 9-12.

[1978] We note that many parties did not address their comments to a particular version of the *BCM*. In such cases, we will refer generally to the *BCM*.

[1979] *See, e.g.*, ACSI comments at 56; Sprint comments at 54 n.30; Texas Public Utility Counsel comments at 29.

[1980] *See, e.g.*, Florida Commission comments at 29-30; GVNW comments at 38-39; NYNEX comments at 57; Ohio Consumers' Counsel comments at 29, n.10; PacTel comments at 74-76; SBC comments at 92-93; TDS comments at 22; Rural Tel Coalition comment at 22, reply at 34-35.

[1981] *See, e.g.*, Rural Tel. Coalition comments at 22; TDS comments at 22; *see also* Time Warner comments at 54-55; USTA comments at 54 n.45.

[1982] NYNEX comments at 57; *see also* SBC comments at 92-93.

[1983] *See, e.g.*, WinStar comments at 34; Texas Statewide Tel. Cooperative, Inc. comments at 14.

[1984] *See, e.g.*, NYNEX comments at 57.

type of central office switch,[1985] and uses ARMIS cost loading factors that assume that costs are spread over the existing, larger investment base.[1986]

833. *Cost Proxy Model (CPM).* Pacific Telesis maintains that its *CPM* is a superior alternative to the *Hatfield* models and *BCM* models because it is more flexible, can be based on non-proprietary information, can be independently audited, can estimate the cost of providing local telephone service for one-fourth (1/4) mile grids or large geographic areas, and reflects the actual locale of subscribers within a census block.[1987]

b. Discussion

834. We believe that the generic forward-looking costing models, in principle, appear best to comport with the preferred economic cost approach discussed previously. Several such models were placed in the record, including *Hatfield 2*, *Hatfield 2.2*, *BCM*, *BCM 2*, and the *CPM*. The *BCM* is designed to produce "benchmark" costs for the provision of basic telephone service within specific geographic regions defined by the Bureau of the Census as Census Block Groups. The *Hatfield 2* model combines output from the *BCM* with independently-developed investment data to produce annual cost estimates for eleven basic network functions. The *CPM* is similar in structure to the *BCM* and *Hatfield 2* models, although it uses different algorithms.

835. These models appear to offer a method of estimating the cost of network elements on a forward-looking basis that is practical to implement and that allows state commissions the ability to examine the assumptions and parameters that go into the cost estimates. Although these models were submitted too late in this proceeding for the Commission and parties to evaluate them fully, our initial examination leads us to believe that the remaining practical and empirical issues can be resolved in the near future. In light of the advantages of such a generic approach, we will further examine these generic economic cost models by the first quarter of 1997 to determine whether we should use one of them to replace the default proxies we adopt in this proceeding. In that event, states would have the option of setting rates in arbitrations on the basis of an economic cost study or by using a generic forward-looking cost model approved at that time.[1988]

[1985] *Id.*

[1986] *Id.*

[1987] PacTel comments at 76.

[1988] We note that we address certain criticisms of the models in the context of their use in the development of the proxy for the unbundled local loop, *supra*, Section VII.C.2.b.(1)(b).

836. Finally, we note that Commission staff developed a model of the telecommunications industry that they designed to simulate industry demand and supply characteristics.[1989] In order to encourage an open-ended discussion of the utility of the staff model, the Common Carrier Bureau sought comment on a working draft of the model that was released. Almost all parties commenting on the staff model urged the Commission not to rely upon the staff model as record evidence in this proceeding.[1990] We are not relying on the staff model to develop the requirements imposed by this Order.

D. Other Issues

1. Future Adjustments to Interconnection and Unbundled Element Rate Levels

a. Background and Comments

837. In the NPRM, we sought comment on whether some cost index or price cap system would be appropriate to ensure that rates reflect expected changes in costs over time.[1991] Only two parties commented on this issue, and neither supported establishment of a price cap system or other index system to adjust rates over time. MCI claims that it is not necessary to recompute TSLRIC costs each year. It argues that large productivity factors are not needed as they are in price cap system, because initial access rates were based on embedded costs, which greatly exceed economic costs. MCI proposes that the Commission should use initial rates as ceilings for a three to five year period. It contends that, if competition develops satisfactorily, there may not be a need to revisit the costing process. On the other hand, MCI suggests that if it appears that LECs retain substantial market power, a performance review could become necessary.[1992] Ad Hoc Telecommunications Users Committee notes that the success of any price cap plan would depend on the accuracy of the productivity offset. It states that an inappropriately low productivity offset could result in excessive charges.[1993]

[1989] *See* Public Notice, *Supplemental Comment Period Designated for Local Competition Proceeding*, CC Docket 96-98, DA 96-1007 (rel. June 20, 1996). The comment period was extended subsequently to July 8, 1996. *See* Public Notice, *Supplemental Comment Period Extended for Local Competition Proceeding*, CC Docket 96-98, DA 96-1030 (rel. June 25, 1996). The Commission did not authorize reply comments.

[1990] *See, e.g.*, Ameritech July 8 comments at 14; NCTA July 8 comments at 2; PacTel July 8 comments at 21; *see also* New York Commission July 8 comments at 1-2 (Commission should institute "collaborative process" whereby federal, state, and industry participants can review model and develop alternatives).

[1991] NPRM at para. 133.

[1992] MCI comments at 68.

[1993] Ad Hoc Telecommunications Users Committee comments at 31.

b. Discussion

838. As noted earlier, we will continue to review our pricing methodology, and will make revisions as appropriate. Accordingly, there is no present need to establish a Commission price cap or cost index system to adjust interconnection and unbundled element rate levels.

2. Imputation

a. Background

839. We sought comment in the NPRM on whether we should require an "imputation rule" in establishing rates for unbundled network elements.[1994] An imputation rule would require that the sum of prices charged for a basket of unbundled network elements not exceed the retail price for a service offered using the same basket of elements. We further solicited comment on any other rules that could be adopted regarding pricing of unbundled network elements that would help to promote the pro-competitive goals of the 1996 Act.

b. Comments

840. Commenters favoring an imputation rule, including some IXCs and other potential entrants, and one state utility counsel, argue that imputation is necessary to prevent potential anticompetitive practices highlighted in the NPRM, such as price squeezes and predatory pricing by incumbent LECs.[1995] Several commenters also endorsed imputation as a method of testing whether rates are reasonable.[1996] Sprint argues that, unless the Commission imposes an imputation rule, incumbent LECs will have little incentive to pursue rate rebalancing activities vigorously before state commissions.[1997] Teleport urges the Commission not to assume that new entrants possess sufficient financial resources to survive a price squeeze and suggests that, if a carrier fails an imputation test, the Commission should find that the market is not sufficiently competitive to

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[1994] NPRM at para. 184.

[1995] *See e.g.*, ACSI comments at 56-57; ACTA comments at 26; Frontier comments at 29-30; NEXTLINK comments at 33; Telecommunications Resellers Ass'n comments at 26; Teleport comments at 60-63; Texas Public Utility Counsel comments at 47-48. MCI comments at Attachment 1 (The Cost of Basic Network Elements: Theory, Modeling and Policy Implications), pp.6-7 (arguing that imputation is necessary, but not sufficient, to prevent price squeezes).

[1996] *See, e.g.*, Intermedia Comments at 14; Sprint Comments at 72-74.

[1997] Sprint reply at 44.

allow incumbent BOC entry into the in-region long distance market.[1998]

841. Among new entrants, Time Warner believes an imputation rule is unnecessary because unbundled element rates will not exceed retail rates in most cases.[1999] It asserts that the Commission should not adopt an imputation rule during the transition period prior to the enactment of universal service reform, and that it is unlikely that competing providers will ignore competitive forces and uniformly retain non-competitive margins in order to support residential rates below TSLRIC.[2000]

842. Several commenters express the view that imputation issues should be left for decision by the states.[2001] A number of state utility commissions that employ an imputation rule in their states endorse imputation as a way to prevent price squeezes, but either take no position on, or oppose, Commission adoption of imputation as a national standard.[2002] The Michigan Commission Staff believes that states should have flexibility to address imputation issues on their own, a process that has already begun in Michigan.[2003] The Washington Commission states that, although it has employed imputation as a method of ensuring that customers of monopoly services do not subsidize other more competitive services, the "threat" posed by below-cost rates generally has been overstated.[2004]

843. The National Association of State Utility Consumer Advocates and the Competition Policy Institute argue that the Commission lacks power to act in this area because of the intrastate/interstate jurisdictional divide established by section 152(b) of the Communications Act

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[1998] Teleport comments at 60-63.

[1999] Time Warner comments at 83.

[2000] *Id.* at 84-85

[2001] *See, e.g.*, Alabama Commission comments at 28; Florida Commission comments at 38 (no need for federal imputation rule if each state may implement unbundled element pricing rules that cover costs); Wyoming Commission comments at 36.

[2002] *See, e.g.*, Colorado Commission comments at 56-57 (opposing a national imputation rule); Washington Commission comments at 35 (questioning the need for preemption order that would require that local service rates exceed costs); Illinois Commission comments at 56-58 (urging the Commission not to prohibit states from adopting imputation rules, but taking no position on the need for a national imputation rule pending further study by the federal-state joint board).

[2003] Michigan Commission Staff comments at 16-17.

[2004] Washington Commission comments at 36.

of 1934.[2005]

844. Responding to the concern, expressed in the NPRM, about requiring imputation for below-cost services, the Texas Commission observes that Texas law will permit waiver of its imputation rule in certain cases.[2006] Frontier states that in the case of subsidized services a limited offset could be applied to reflect the subsidy, but only in the uncommon case in which the incumbent LEC can affirmatively prove that the affected class of service is priced below its forward-looking incremental cost.[2007]

845. Joint Consumer Advocates and the Ohio Commission suggest that adoption of an imputation rule is unnecessary because both the incumbent LEC and the new entrant will face the same burdens in providing below cost service, and each may recover their costs through other revenue sources, such as federal and state universal service funds.[2008] Joint Consumer Advocates and Ohio Consumers' Counsel take issue with the assumption that local service is subsidized, and argue imputation is unnecessary because retail rates are not significantly below cost.[2009] They assert that since other services, such as toll, also use the local loop, it is improper to load all of the costs of the local loop onto local service.[2010]

846. Several commenters voice concerns that an imputation rule would be difficult to implement in rural areas.[2011] The Minnesota Independent Coalition states that imputation could lead to increases in local rates for rural service, in contravention of the 1996 Act's universal service requirements of preserving rates in rural areas that are reasonably comparable to rates charged for similar services in urban areas, and the universal service policy requirements of

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[2005] Competition Policy Institute comments at 13; Natl. Ass'n of State Util. Consumer Advocates comments at 5-8; Joint Consumer Advocates reply at 14.

[2006] Texas Commission comments at 29-30, Attachment II (Public Util. Regulatory Act of 1995, Tex. Rev. Civ. Stat. Ann., Art. 1446(c)) (Texas law requires the Texas Commission to adopt imputation rules by December 1, 1996).

[2007] Frontier comments at 29-30.

[2008] Joint Consumer Advocates reply at 15-16; Ohio Commission comments at 67.

[2009] Joint Consumer Advocates reply at 14-16; Ohio Consumers' Counsel comments at 38-40.

[2010] *Id.*

[2011] *See, e.g.*, TCA Comments at 8.

254(b).[2012]

847. Incumbent LECs also oppose imputation, claiming that it would create opportunities for arbitrage,[2013] fail to reflect the costs of unbundling incumbent LEC networks,[2014] put pressure on states to raise retail rates,[2015] create a de facto ceiling preventing incumbent LECs from recovering their costs,[2016] and constitute an unconstitutional taking of incumbent LEC revenues.[2017] NYNEX and BellSouth also assert that restrictions on cost recovery are inconsistent with the 1996 Act's requirement that unbundled element rates be based on costs.[2018] According to USTA and Ameritech, an imputation rule may cause incumbent LECs to subsidize new entrants, and lead to inefficient entry.[2019] BellSouth argues that intrastate retail prices are based on factors other than cost, such as the policies of the state commission that approved the charges, and that an imputation rule would interfere with the states' exclusive ratemaking authority over intrastate rates and charges. According to BellSouth, Congress did not establish any requirement or expectation that these pricing standards would yield charges that would bear any particular relationship to one another, and BellSouth asserts there is no reason to expect the sum of unbundled element prices to add up to the retail rate any more than one would expect that the individual parts of an automobile could be obtained for less than the price of an already-assembled car. [2020]

[2012] Minn. Ind. Coalition comments at 31, 33; *see also* Western Alliance comments at 3-4 (Commission should not adopt an imputation rule until other, explicit mechanisms are in place to ensure the statutory goal of reasonable parity of urban and rural rates).

[2013] *E.g.*, USTA comments at 75.

[2014] *See, e.g.*, Ameritech comments at 83-84 (rejecting a "sum-of-the-parts" test for unbundled element pricing, and arguing that an imputation rule must make allowance for costs of unbundling the network); GTE comments at 64-65.

[2015] *E.g.*, USTA comments at 77.

[2016] *E.g.*, NYNEX comments at 60 (asserting that such a price ceiling conflicts with the 1996 Act).

[2017] *See, e.g.*, NYNEX comments at 60-61; USTA comments at 77, reply at 31.

[2018] BellSouth reply at 42; NYNEX comments at 61.

[2019] Ameritech comments at 84; USTA comments at 77.

[2020] BellSouth comments at 68; *see also* US Network Services comments at 5-6.

c. Discussion

848. Although we recognize, as several commenters observe, that an imputation rule could help detect and prevent price squeezes, we decline to impose an imputation requirement. Adoption of an imputation rule could force states to engage in a major rate rebalancing effort at this time, because it would impose substantial additional burdens on states at a time when they will need to devote significant resources to implementing the 1996 Act.

849. In addition to our practical concerns regarding implementation of an imputation rule, we find that an imputation rule may not be necessary to achieve the pro-competitive goals of the 1996 Act. As some commenters, including several state commissions, suggest, competing providers may be able to provide basic service, at less than the cost of facilities and associated management, just as incumbent LECs do currently, by selling customers higher profit vertical or intrastate toll services, or through receipt of access revenues and subsidies. Further, the Ohio Consumers' Counsel suggest that below-cost rates may not be sufficiently prevalent to justify a national imputation rule.[2021] The Joint Consumer Advocates and the Ohio Consumers' Counsel question whether local service is, in fact, underpriced.[2022]

850. We give special weight to the comments of several state commissions that currently employ imputation rules.[2023] These state commissions endorse imputation as a tool to prevent price squeezes, but urge us only to provide states with the flexibility to adopt imputation rules. We agree with those state commission commenters that argue that nothing in the 1996 Act prohibits individual states from adopting imputation rules. While an imputation rule may be pro-competitive, we will leave the implementation of such rules to individual states for the time being.

[2021] Ohio Consumers' Counsel comments at 39.

[2022] Joint Consumer Advocates reply at 16; Ohio Consumers' Counsel comments at 39.

[2023] *See, e.g.*, Colorado Commission comments at 56-57; Illinois Commission comments at 57-58; Michigan Commission Staff comments at 16-17; Washington Commission comments at 35.

3. Discrimination

a. Background

851. In the NPRM, we noted the different usages of the term "discrimination" in the 1996 Act and the 1934 Act.[2024] Sections 251 and 252 require that interconnection and unbundled element rates be "nondiscriminatory."[2025] Similarly, section 251(c)(4) requires that, in making resale available, carriers not impose "discriminatory conditions or limitations on resale."[2026] Finally, section 252(e) provides that states may reject a negotiated agreement or a portion of the agreement if it "discriminates" against a carrier not a party to the agreement and section 252(i) requires incumbent LECs to "make available any interconnection, service, or network element provided under an agreement . . . to which it is a party to any requesting telecommunications carrier upon the same terms and conditions."[2027] In contrast, section 202(a) of the 1934 Act provides that "(i)t shall be unlawful for any common carrier to make any unjust or unreasonable discrimination in charges . . . for . . . like communication service."[2028]

852. We sought comment on "the meaning of the term 'nondiscriminatory' in the 1996 Act compared with the phrase 'unreasonable discrimination' in the 1934 Act." We asked specifically whether Congress intended to prohibit all price discrimination, including measures such as density zone pricing or volume and term discounts, by choosing the word "nondiscriminatory." We further asked whether sections 251 and 252 could be interpreted to prohibit only unjust or unreasonable discrimination. Finally, we sought comment on whether the 1996 Act prohibited carriers from charging different rates to parties that are not similarly situated.[2029]

[2024] NPRM at para. 155.

[2025] 47 U.S.C. §§ 251(c)(2), (3), (6), and 252(d)(1).

[2026] 47 U.S.C. § 251(c)(4)(B). *See infra*, Section VIII.C..

[2027] 47 U.S.C. §§ 252(e), (i).

[2028] 47 U.S.C. § 202(a).

[2029] NPRM at para. 156.

b. Comments

853. Many state regulatory commissions, several incumbent LECs, and USTA maintain that the term "nondiscriminatory" used in the 1996 Act is synonymous with the prohibition of "unjust and unreasonable discrimination" used in the 1934 Act.[2030] Generally, these parties agree that pricing variations are only discriminatory when the affected parties are similarly situated. They argue that a blanket prohibition on all price differences, even when justified by costs, would be anti-competitive and would appear to defeat the process of negotiation. The Ohio Commission argues that smaller companies, not similarly situated to the larger telephone companies already in operation, need different treatment in order to compete.[2031] Finally, they contend that Congress did not intend to prohibit reasonably supported plans, such as volume and term discounts. The Pennsylvania Commission argues that, if Congress had intended to prohibit cost-based price differences, it would have included interconnection and unbundled elements in the prohibition against geographic price differences for toll rates, which is contained in Section 254(g).[2032] Pacific Telesis argues that different prices are permissible under the "nondiscriminatory" standard wherever incremental costs decline as output increases.[2033]

854. Other commenters, including MCI and MFS, assert that the term "nondiscriminatory" in the 1996 Act must be interpreted to have a more stringent meaning than the phrase "unjust and unreasonable discrimination" used in the 1934 Act.[2034] Several parties suggest that since the conferees considered and rejected a version of section 251 that applied an "unreasonably discriminatory" standard to the actions of incumbent LECs, the change in wording was purposeful.[2035] Generally, these parties argue that although the "nondiscriminatory" standard

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[2030] *See, e.g.*, Alabama Commission comments at 23; BellSouth comments at 58; California Commission comments at 31-33; Colorado Commission comments at 48; District of Columbia Commission comments at 25; Illinois Commission comments at 47; Indiana Commission comments at 25; MECA comments at 55-56; Ohio Commission comments at 51; PacTel comments at 76-77; USTA comments at 57-58.

[2031] Ohio Commission comments at 53.

[2032] Pennsylvania Commission comments at 32.

[2033] PacTel comments at 77; *but see* AT&T reply at 35.

[2034] *See, e.g.*, MCI comments at 71; MFS comments at 63; ALTS reply at 40.

[2035] NCTA comments at 31 n.114 (*citing* S. 652, 104th Cong. 1st Sess. § 101 (deleting Section 251(c)(2)(C)) (Draft, Nov. 27, 1995)); *see also* MFS comments at 63.

is more stringent, cost-based price differences are nonetheless permissible under the 1996 Act.[2036] The Independent Cable & Telecommunications Association contends that the only way to prevent incumbent LECs from discriminating against smaller companies and new entrants is to prohibit all non-cost based price differences.[2037] LDDS argues that only cost-based price differentials should be permitted, and that any non-cost-based volume discount should be prohibited, even if arrived at through agreement of the parties.[2038]

855. A third group of commenters argue for a strict reading of the term "nondiscriminatory."[2039] They argue that the plain meaning of the term "nondiscriminatory" without qualification demonstrates that under section 251 even reasonable discrimination is impermissible.[2040] R. Koch contends that if there is *any* discrimination, small entrants will be at a disadvantage.[2041] Finally, they maintain that the higher standard reflects the distinction between the carrier-user relationship being regulated in section 202(a) and the intercarrier relationship addressed in section 251(c).[2042]

856. CMRS providers argue that some state regulations treat CMRS providers differently than wireline new entrants with respect to the rates for interconnection with incumbent LECs. AT&T Wireless contends that the New York and Connecticut Commissions require incumbent LECs to charge two distinct interconnection rates depending on whether the carrier is classified as a CMRS provider or competing provider of local exchange service.[2043] According to AT&T Wireless, in New York, the wireline competitive LEC rate for termination of traffic on the incumbent LEC network is less than one cent per minute and the CMRS provider rate is

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[2036] *See, e.g.*, MCI comments at 71-72; MFS comments at 64; Michigan Commission comments at 18; Municipal Utilities comments at 14-15; Pennsylvania Commission comments at 32; Sprint comments at 64-65.

[2037] Ind. Cable & Telecomm. Ass'n reply at 11-12.

[2038] LDDS reply at 40-41.

[2039] *See, e.g.*, AT&T comments at 68-69; NCTA comments at 31 (section 251(c) requires strict scrutiny of any discrimination, not solely unreasonable discrimination); WinStar comments at 7.

[2040] *See, e.g.*, WinStar comments at 7.

[2041] *See, e.g.*, R. Koch comments at 3.

[2042] NCTA comments at 31.

[2043] Letter from Cathleen A. Massey, AT&T Wireless Services, to William F. Caton, Acting Secretary, FCC, July 2, 1996, filed in CC Docket Nos. 95-185 and 96-98, at 1-3 (*AT&T July 2, 1996 Ex Parte*).

approximately 2.6 cents ($0.026) per minute.[2044] AT&T Wireless further contends that, in order to obtain the lower rate, a CMRS provider in New York must comply with state regulations, such as universal service obligations associated with residential and Lifeline service.[2045] Bell Atlantic NYNEX Mobile submits that in Connecticut, the rate for wireline new entrants' termination of traffic on the incumbent LEC network is less than one cent ($0.01) per minute and the CMRS provider rate is 4.14 cents ($0.0414) per minute.[2046] AT&T Wireless states that California has ordered incumbent LECs to implement interim bill-and-keep compensation for interconnection for wireline entrants' interconnection but not for CMRS providers' interconnection,[2047] and Florida has ruled that no compensation shall be paid to mobile carriers by incumbent LECs for land-originated calls.[2048]

857. In addition to their assertion regarding rate discrimination, CMRS providers maintain that state commissions permit incumbent LECs to treat CMRS providers in a discriminatory manner with respect to the terms and conditions of interconnection.[2049] Bell Atlantic NYNEX Mobile states that in Connecticut, Maryland, New York and Texas, the rates paid by Bell Atlantic NYNEX Mobile to the connecting LEC to terminate calls originated on Bell Atlantic NYNEX Mobile's network are more than twice the rates paid by competing wireline LECs to incumbent LECs.[2050] Bell Atlantic NYNEX Mobile also states that "these disparities have no rational cost

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[2044] *Id.*

[2045] *See Order Instituting Framework for Directory Listings, Carrier Interconnection and Carrier Compensation*, New York Public Service Commission, CASE 94-C-0095 (New York Commission, September 27, 1996) at 15.

[2046] Bell Atlantic NYNEX Mobile comments in CC Docket No. 95-185, at Exhibit A.

[2047] *Competition For Local Exchange Service*, Decision 95-07-054, Appendix A, para. 7 (California Commission, July 24, 1995).

[2048] *See Investigation Into the Rates For Interconnection of Mobile Service Providers With Facilities of Local Exchange Companies*, Docket No. 940235-TL, slip op. at 24 (Florida Commission, Oct. 11, 1995).

[2049] AT&T comments in CC Docket No. 95-185, at 27; AirTouch Communications comments in CC Docket No. 95-185, at 33; Bell Atlantic NYNEX Mobile comments in CC Docket 95-185, at 5-6; Comcast Corporation comments in CC Docket No. 95-185, at 6-7; New Par comments in CC Docket No. 95-185, at 4-5.

[2050] Bell Atlantic NYNEX Mobile comments in CC Docket No. 95-185, at Exhibit A, p.5. Bell Atlantic NYNEX Mobile's Exhibit A shows that LEC charges to competitive providers on an average rate per minute are considerably less than those to CMRS carriers: In Connecticut, Bell Atlantic NYNEX Mobile pays 4.14 cents/min. ($0.0414) to terminate local traffic on a LEC network while competitive providers pay 0.8 cents/min. ($0.008); in Maryland, Bell Atlantic NYNEX Mobile pays 2.27 cents/min. ($0.0227) to terminate local traffic on a LEC network, while competitive providers pay 0.5 cents/min. ($0.005); in New York, Bell Atlantic NYNEX

basis since an incumbent LEC's costs to complete a call received from Bell Atlantic NYNEX Mobile should be no higher than its costs to complete calls received from other carriers."[2051] Similarly, APC states that its interconnection agreements with Bell Atlantic, which are identical in Maryland, Virginia, West Virginia, and District of Columbia, artificially inflate its costs by at least 3.1 cents ($0.031) per minute.[2052]

858. Western Wireless also provides examples of discriminatory interconnection rates by LECs.[2053] Western Wireless states that it has been unable to reach an agreement with any incumbent LECs in its wireless service area that is based on cost or that provides reciprocal compensation.[2054] AT&T Wireless contends that states regularly permit LECs to charge wireless carriers significantly higher rates than competing LECs for intrastate interconnection.[2055] CTIA cites LEC-LEC interconnection agreements in 18 states that provide for rates much below the approximate nationwide average incumbent LEC-CMRS interconnection rate of three cents ($0.03) per minute.[2056]

Mobile pays 2.59 cents/min. ($0.0259) to terminate local traffic on a LEC network, while competitive providers pay only 0.98 cents/min.; and in Texas, Bell Atlantic NYNEX Mobile pays 1.7 cents/min. ($0.017) to terminate local traffic on a LEC network, while competitive providers pay zero cents/min. ($0.0). *Id.*

[2051] *Id.* at 5-6.

[2052] APC comments in CC Docket No. 95-185 at 5-6 (alleging it pays Bell Atlantic a monthly $25 per trunk surcharge between its mobile switching center and Bell Atlantic's tandem, a usage-sensitive charge for transport and switching elements, and $800 a month for termination for SS7 connectivity, while Bell Atlantic pays APC nothing in return).

[2053] Letter from Doane F. Kiechel, counsel to Western Wireless Corporation, to William F. Caton, Acting Secretary, FCC, July 5, 1996, in CC Docket No. 96-98.

[2054] *Id.* at 4.

[2055] *AT&T July 2, 1996 Ex Parte* at 3.

[2056] Letter from Randall S. Coleman, CTIA, to Michele Farquhar, Chief, Wireless Telecommunications Bureau, FCC, July 2, 1996, in CC Docket Nos. 95-185 and 96-98, at Attachments.

c. Discussion

859. We conclude that the term "nondiscriminatory" in the 1996 Act is not synonymous with "unjust and unreasonable discrimination" in section 202(a), but rather is a more stringent standard.[2057] Finding otherwise would fail to give meaning to Congress's decision to use different language. We agree, however, with those parties that argue that cost-based differences in rates are permissible under sections 251 and 252.

860. Section 252(d)(1), for example, requires carriers to base interconnection and network element charges on costs. Where costs differ, rate differences that accurately reflect those differences are not discriminatory. This is consistent with the economic definition of price discrimination, which is "the practice of selling the same product at two or more prices where the price differences do not reflect cost differences . . . An important feature of the economic definition of price discrimination is that it occurs not only when prices are different in the presence of similar costs but also *when the prices are the same and the costs of supplying customers are different.*" [2058] As one economist has recognized, differential pricing is "one of the most prevalent forms of marketing practices" of competitive enterprises.[2059] Strict application of the term "nondiscriminatory" as urged by those commenters who argue that prices must be uniform would itself be discriminatory according to the economic definition of price discrimination. If the 1996 Act is read to allow no price distinctions between companies that impose very different interconnection costs on LECs, competition for all competitors, including small companies, could be impaired. Thus, we find that price differences, such as volume and term discounts, when based upon legitimate variations in costs are permissible under the 1996 Act, if justified.

861. On the other hand, price differences based not on cost differences but on such considerations as competitive relationships, the technology used by the requesting carrier, the nature of the service the requesting carrier provides, or other factors not reflecting costs, the requirements of the Act, or applicable rules, would be discriminatory and not permissible under the new standard. Such examples include the imposition of different rates, terms and conditions based on the fact that the competing provider does or does not compete with the incumbent LEC, or offers service via wireless rather than wireline facilities. We find that it would be unlawfully discriminatory, in violation of sections 251 and 252, if an incumbent LEC were to charge one

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[2057] *See supra,* Section IV.G, discussing nondiscriminatory terms and conditions for interconnection, and *supra,* Section V.G., discussing nondiscriminatory terms and conditions for unbundled network elements.

[2058] David L. Kaserman & John W. Mayo, Government & Business: *The Economics of Antitrust & Regulation* at 273-74 (1995) (*citing* George J. Stigler, *The Theory of Price* (3d ed. 1966)) (emphasis added).

[2059] Hal R. Varian, "Price Discrimination," in *Handbook of Industrial Organization,* vol.1, p. 598 (R. Schmalensee and R.D. Willig eds., 1989).

class of interconnecting carriers, such as CMRS providers, higher rates for interconnection than it charges other carriers, unless the different rates could be justified by differences in the costs incurred by the incumbent LEC.

862. State regulations permitting non-cost based discriminatory treatment are prohibited by the 1996 Act. This conclusion is consistent with both the letter and the spirit of the 1996 Act and our determination that the pricing for interconnection, unbundled elements, and transport and termination of traffic should not vary based on the identity or classification of the interconnector.[2060]

[2060] *See infra*, Section XI.A., discussing transport and termination rates.

VIII. RESALE

863. Section 251(c)(4) imposes a duty on incumbent LECs to offer certain services for resale at wholesale rates. Specifically, section 251(c)(4) requires an incumbent LEC:

> (A) to offer for resale at wholesale rates any telecommunications service that the carrier provides at retail to subscribers who are not telecommunications carriers; and
>
> (B) not to prohibit, and not to impose unreasonable or discriminatory conditions or limitations on, the resale of such telecommunications service, except that a State commission may, consistent with regulations prescribed by the Commission under this section, prohibit a reseller that obtains at wholesale rates a telecommunications service that is available at retail only to a category of subscribers from offering such service to a different category of subscribers.[2061]

864. The requirement that incumbent LECs offer services at wholesale rates is described in section 252(d)(3), which sets forth the pricing standard that states must use in arbitrating agreements and reviewing rates under BOC statements of generally available terms and conditions:

> [A] State commission shall determine wholesale rates on the basis of retail rates charged to subscribers for the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier.

Section VIII.A. of this Order discusses the scope of section 251(c)(4). Section VIII.B. addresses the determination of "wholesale rates." Section VIII.C. considers the issue of conditions or limitations on resale under this section, Section VIII.D. discusses the resale obligations under section 251(b)(1), and Section VIII.E. considers the application of access charges in the resale environment.

[2061] 47 U.S.C. § 251(c)(4).

A. Scope of Section 251(c)(4)

1. Background and Comments

865. In the NPRM, we sought comment generally on the scope of section 251(c)(4).[2062] AT&T and MCI request that the Commission adopt a minimum list of services that should be available for resale under section 251(c)(4).[2063] Cable & Wireless, the Telecommunications Resellers Association, and others argue for an expansive definition of "telecommunications services."[2064] For example, MCI argues that we should explicitly identify the following as telecommunications services that must be made available for resale: measured-rate business, flat-rate business, measured-rate residential, flat-rate residential; custom calling features (including all CLASS services); call blocking services; voice messaging; Integrated Services Digital Network (ISDN), Basic Rate Interface (BRI), and Primary Rate Interface (PRI); flat-rated and measured trunk services (including all types of PBX trunks); Automatic Number Identification (ANI) over T-1; data services; promotions, optional calling plans, special pricing plans; calling card, directory services, operator services; intraLATA toll; public access line service; semi-public coin telephone service; foreign exchange services; video dialtone; and Centrex and all feature packages.[2065]

866. Incumbent LECs on the other hand, argue for a much more limited set of services, primarily those generally thought of as basic telephone services.[2066] For example, SBC lists the following as examples of services that should be excluded: billing and collection; enhanced billing products; enhanced white page listings; inside wire; BDS/LAN; customer premises equipment; and information services.[2067]

867. Some commenters argue that parties seeking discounted telecommunications services for their own telephony needs should not be allowed to purchase services at wholesale prices. For example, Roseville Telephone argues that (1) requests for discounted resale services must come from carriers, not from end users; (2) a wholesale customer must resell 95 percent of the

[2062] NPRM at para. 173.

[2063] AT&T comments at 77 n.113; MCI comments at 84.

[2064] Cable & Wireless comments at 38-39; Telecommunications Resellers Ass'n comments at 18 n.47; AT&T comments at 76-78; MCI comments at 84.

[2065] MCI comments at 84.

[2066] *See, e.g.*, MECA comments at 60; NYNEX comments at 76-7; SBC reply at 13.

[2067] SBC comments at 67-68.

services it purchases at wholesale prices to unaffiliated companies; and (3) limits should be placed on how much of what wholesale service is sold to any one subscriber.[2068] Similarly, GTE argues that new entrants must resell service they purchase under section 251(c)(4) and not simply use such services for their own internal or administrative purposes.[2069] Cincinnati Bell requests that we explicitly state that resellers of incumbent LEC service must be telecommunications carriers.[2070] Conversely, AT&T opposes predicating the ability to purchase services at wholesale rates on the percentage of customers that purchase the resold service.[2071]

868. Some parties address the application of section 251(c)(4) to the services incumbent LECs sell to independent public payphone providers. The American Public Communications Council contends that independent public payphone providers are not "telecommunications carriers."[2072] The American Public Communications Council cites the definition in section 3(44) that excludes "aggregators," as defined in section 226[2073] and points out that we have previously found that independent public payphone providers are aggregators insofar as they exercise control over payphones.[2074] Thus, the American Public Communications Council argues, services sold to independent public payphone providers by incumbent LECs would be "telecommunications service[s] that [an incumbent LEC] provides at retail to subscribers who are not telecommunications carriers," thereby making such services subject to section 251(c)(4).[2075] The American Public Communications Council also argues that nothing in section 251 requires an entity purchasing services for resale to be a "telecommunications carrier."[2076] NYNEX argues that

[2068] Roseville Tel. comments at 3-5.

[2069] GTE comments at 47.

[2070] Cincinnati Bell comments at 31.

[2071] AT&T comments at 80 n.120.

[2072] American Public Communications Council comments at 2-3.

[2073] 47 U.S.C. § 153(44). Section 226(a)(2) defines "aggregator" as "any person that, in the ordinary course of its operations, makes telephones available to the public or to transient users of its premises, for interstate telephone calls using a provider of operator services. 47 U.S.C. § 226(a)(2).

[2074] American Public Communications Council comments at 2 (citing *Policies and Rules Concerning Operator Service Providers, Report and Order*, 6 FCC Rcd 2744 (1991), *recon.* 7 FCC Rcd 3882 (1992)).

[2075] American Public Communications Council at 3.

[2076] *Id.*

independent public payphone providers do not purchase these services for resale, but for their own use.[2077] Additionally, NYNEX argues, independent payphone providers do not interpose themselves between incumbent LECs and their existing retail customers, and thus do not enable incumbent LECs to avoid some portion of costs they incur in dealing with those customers.[2078] MFS argues that no resale relationship exists between an incumbent LEC and an independent public payphone provider.[2079]

869. Parties dispute whether specially-priced bundles of services must be offered for resale. SNET argues that LECs are not required to resell bundled services, as long as the services are all offered separately. SNET contends that requiring wholesale offerings of bundled services would deter competitive offerings by incumbent LECs.[2080] SBC argues that bundled services are not single services and therefore not subject to the resale provisions of the 1996 Act.[2081] The Telecommunications Resellers Association, TCC, LDDS, and MCI take the opposite position,[2082] noting that bundled items are often sold at prices well below the sum of their stand-alone prices.

870. The Telecommunications Resellers Association and Cable & Wireless argue that, where the incumbent LEC offers services only on a bundled basis, these services should be unbundled and offered separately, at wholesale rates.[2083] AT&T specifically argues that it should be allowed to purchase local exchange service without operator services.[2084] Pacific Telesis, NYNEX, and NCTA argue that incumbent LECs should not be subject to this requirement so long as the services are not offered to retail customers on a stand-alone basis.[2085] Bell Atlantic opposes AT&T's claim that Bell Atlantic should be required to provide local service without

[2077] NYNEX reply at 39.

[2078] *Id.*

[2079] MFS reply at 32.

[2080] SNET comments at 34.

[2081] *Id.* at 72-73.

[2082] Telecommunications Resellers Ass'n comments at 18; TCC comments at 44; LDDS comments at 83; MCI comments at 89.

[2083] *See, e.g.*, Telecommunications Resellers Ass'n comments at 19 n.49; Cable & Wireless comments at 48.

[2084] AT&T comments at 81 n.123.

[2085] PacTel comments at 87; NYNEX comments at 73; NCTA comments at 57.

operator services for resale.[2086]

2. Discussion

871. Section 251(c)(4)(A) imposes on all incumbent LECs the duty to offer for resale "any telecommunications service that the carrier provides at retail to subscribers who are not telecommunications carriers."[2087] We conclude that an incumbent LEC must establish a wholesale rate for each retail service that: (1) meets the statutory definition of a "telecommunications service;" and (2) is provided at retail to subscribers who are not "telecommunications carriers."[2088] We thus find no statutory basis for limiting the resale duty to basic telephone services, as some suggest.

872. We need not prescribe a minimum list of services that are subject to the resale requirement. State commissions, incumbent LECs, and resellers can determine the services that an incumbent LEC must provide at wholesale rates by examining that LEC's retail tariffs. The 1996 Act does not require an incumbent LEC to make a wholesale offering of any service that the incumbent LEC does not offer to retail customers. State commissions, however, may have the power to require incumbent LECs to offer specific intrastate services.[2089]

873. Exchange access services are not subject to the resale requirements of section 251(c)(4). The vast majority of purchasers of interstate access services are telecommunications carriers, not end users. It is true that incumbent LEC interstate access tariffs do not contain any limitation that prevents end users from buying these services, and that end users do occasionally purchase some access services, including special access,[2090] Feature Group A,[2091] and certain

[2086] Bell Atlantic reply at 25.

[2087] 47 U.S.C. § 251(c)(4)(A).

[2088] "Telecommunications service" is defined in section 3(46) to mean "the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used." 47 U.S.C. § 153(46) "Telecommunications" is, in turn, defined in section 3(43) as "the transmission, between or among points specified by the user, of information of the user's choosing without change in the form or content of the information as sent and received." 47 U.S.C. § 153(43). "Telecommunications carrier" is defined in section 3(44) to mean "any provider of telecommunications services, except that such term does not include aggregators of telecommunications services (as defined in section 226)." 47 U.S.C. § 153(44).

[2089] *See, e.g.*, Illinois Public Utilities Act, Section 13-505.5.

[2090] End users may purchase special access from incumbent LECs in order to use high volume services offered by IXCs, such as AT&T's Megacom service.

Feature Group D elements for large private networks.[2092] Despite this fact, we conclude that the language and intent of section 251 clearly demonstrates that exchange access services should not be considered services an incumbent LEC "provides at retail to subscribers who are not telecommunications carriers" under section 251(c)(4). We note that virtually all commenters in this proceeding agree, or assume without stating, that exchange access services are not subject to the resale requirements of section 251(c)(4).[2093]

874. We find several compelling reasons to conclude that exchange access services should not be subject to resale requirements. First, these services are predominantly offered to, and taken by, IXCs, not end users. Part 69 of our rules defines these charges as "carrier's carrier charges,"[2094] and the specific part 69 rules that describe each interstate switched access element refer to charges assessed on "interexchange carriers" rather than end users.[2095] The mere fact that fundamentally non-retail services are offered pursuant to tariffs that do not restrict their availability, and that a small number of end users do purchase some of these services, does not alter the essential nature of the services. Moreover, because access services are designed for, and sold to, IXCs as an input component to the IXC's own retail services, LECs would not avoid any "retail" costs when offering these services at "wholesale" to those same IXCs. Congress clearly intended section 251(c)(4) to apply to services targeted to end user subscribers, because only those services would involve an appreciable level of avoided costs that could be used to generate a wholesale rate. Furthermore, as explained in the following paragraph, section 251(c)(4) does not entitle subscribers to obtain services at wholesale rates for their own use. Permitting IXCs to purchase access services at wholesale rates for their own use would be inconsistent with this requirement.

875. We conclude that section 251(c)(4) does not require incumbent LECs to make

[2091] Feature Group A is similar to a local exchange service, but is used for interstate access. In such circumstances, the end user dials a seven-digit number to reach the LEC's "dial tone office" serving an IXC, where the LEC switches the call to the IXC's POP via a dedicated line-side connection. Feature Group A represents approximately one percent of incumbent LEC transport revenues.

[2092] Feature Group D is the set of elements through which IXCs today almost universally purchase switched access services from incumbent LECs.

[2093] *See, e.g.*, Cincinnati Bell comments at 34; Citizens Utilities comments at 25; NYNEX comments at 35 n.70; Rural Tel. Coalition comments at 20; J. Staurulakis comments at 6; SBC reply at 13; USTA reply at 31; Wisconsin Commission comments at Attachment, pp. 7-8.

[2094] 47 U.S.C. § 69.5(b).

[2095] The one exception, as discussed below, is the SLC, which is assessed on end users regardless of who purchases the access services from the incumbent LEC.

services available for resale at wholesale rates to parties who are not "telecommunications carriers" or who are purchasing service for their own use. The wholesale pricing requirement is intended to facilitate competition on a resale basis. Further, the negotiation process established by Congress for the implementation of section 251 requires incumbent LECs to negotiate agreements, including resale agreements, with "requesting telecommunications carrier or carriers,"[2096] not with end users or other entities. We further discuss the definition of "telecommunications carrier" in Section IX. of the Order.

876. With regard to independent public payphone providers, however, we agree with the American Public Communication Council's argument that such carriers are not "telecommunications carriers" under section 3(44). We therefore also agree with the American Public Communications Council's contention that the services independent public payphone providers obtain from incumbent LECs are telecommunications services that incumbent LECs provide "at retail to subscribers who are not telecommunications carriers" and that such services should be available at wholesale rates to telecommunications carriers. Because we conclude that independent public payphone providers are not "telecommunications carriers," however, we conclude that incumbent LECs need not make available service to independent public payphone providers at wholesale rates. This is consistent with our finding that wholesale offerings must be purchased for the purpose of resale by "telecommunications carriers."

877. We conclude that the plain language of the 1996 Act requires that the incumbent LEC make available at wholesale rates retail services that are actually composed of other retail services, *i.e.*, bundled service offerings. Section 251(c)(4) states that the incumbent LEC must offer for resale "any telecommunications service" provided at retail to subscribers who are not telecommunications carriers. The resale provision of the 1996 Act does not contain any language exempting services if those services can be duplicated or approximated by combining other services. On the other hand, section 251(c)(4) does not impose on incumbent LECs the obligation to disaggregate a retail service into more discrete retail services. The 1996 Act merely requires that any retail services offered to customers be made available for resale.

B. Wholesale Pricing

1. Background

878. As discussed above, section 251(c)(4) requires incumbent LECs to offer at "wholesale rates" any telecommunications services that the carrier provides at retail to subscribers who are not telecommunications carriers. Section 252(d)(3) establishes the standard that states must use in determining wholesale rates in arbitrations or in reviewing wholesale rates under BOC statements of generally available terms and conditions. Specifically, section 252(d)(3) provides that wholesale rates shall be set "on the basis of retail rates charged to subscribers for

[2096] 47 U.S.C.§ 252(a)(1).

the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier."[2097]

879. In the NPRM, we generally sought comment on the meaning of the term "wholesale rates" in section 251(c)(4).[2098] We asked if we could and should establish principles for the states to apply in order to determine wholesale prices in an expeditious and consistent manner. We also sought comment on whether we should issue rules for states to apply in determining avoided costs. We stated that we could, for example, determine that states are permitted under the 1996 Act to direct incumbent LECs to quantify their costs for any marketing, billing, collection, and similar activities that are associated with offering retail, but not wholesale, services.[2099] We also sought comment on whether avoided costs should include a share of common costs and general overhead or "markup" assigned to such costs. LECs would then reduce retail rates by this amount, offset by any portion of expenses that they incur in the provision of wholesale rates.[2100] We noted that this approach appeared to be consistent with the 1996 Act, but would create certain administrative difficulties because all of the information regarding costs is under the control of the incumbent LECs.[2101] We also asked for comment on several alternative approaches. For example, we asked whether we could establish a uniform set of presumptions regarding avoided costs that states could adopt and that would apply in the absence of a quantification of such costs by incumbent LECs.[2102] Additionally, we asked whether we should identify specific accounts or portions of accounts in the Commission's Uniform System of Accounts ("USOA")[2103] that the states should include as avoided costs.[2104] We also requested comment on whether we should

[2097] 47 U.S.C. § 252(d)(3).

[2098] NPRM at para. 179.

[2099] *Id.* at para. 180.

[2100] *Id.*

[2101] *Id.*

[2102] *Id.* at para. 181.

[2103] 47 C.F.R. § 32.

[2104] NPRM at para. 181.

establish rules that allocate avoided costs across services.[2105] We asked whether incumbent LECs should be allowed,
or required, to vary the percentage wholesale discounts across different services based on the degree the avoided costs relate to those services.[2106] Finally, we asked whether we should adopt a uniform percentage discount off of the retail rate of each service.[2107]

2. Comments

880. Most commenters other than incumbent LECs and some states advocate establishment of national pricing rules regarding arbitrated rates for competitors' acquisition of services for resale under section 251(c)(4).[2108] Incumbent LECs and state commissions argue that we do not have the authority to establish such rules and, even assuming such authority exists, we should not exercise it.[2109] Bay Springs, *et al.*, GVNW, and the Rural Telephone Coalition argue that establishing national wholesale pricing rules would insufficiently recognize differences in LECs' operations, resulting in inadequate compensation for small incumbent LECs.[2110]

881. Many commenters preface their arguments concerning wholesale discounts calculation with a general discussion of the role of resale in creating a competitive local exchange market. IXCs and resellers argue that resale is the quickest method of developing ubiquitous competition and therefore encourage the Commission to adopt of national rules that would result

[2105] *Id.* at para. 182.

[2106] *Id.*

[2107] *Id.*

[2108] *See, e.g.*, AT&T comments at 82; Cable & Wireless comments at 37; CompTel comments at 96; MFS comments at 72; LCI comments at 31; Telecommunications Resellers Ass'n comments at 24; Teleport comments at 55-56; TCC comments at 45.

[2109] *See, e.g.*, BellSouth comments at 67; SBC comments at 74; District of Columbia Commission comments at 32; Pennsylvania Commission comments at 37.

[2110] Bay Springs, *et al.*, comments at 17; GVNW comments at 40; Rural Tel. Coalition comments at 21. For example, the Rural Telephone Coalition points out that setting a national wholesale discount based on certain assumed levels of marketing expenses overstates avoided costs for small and rural incumbent LECs because such carriers face less competition and therefore have fewer marketing expenses. Rural Telephone Coalition comments at 21. Similarly, Bay Springs, *et al.*, GVNW, and the Rural Telephone Coalition argue that smaller incumbent LECs will not be able to avoid as many shared costs because their smaller staffing and operational functions are less responsive to the overall size of the carriers' operations. Bay Springs, *et al.*, comments at 17; GVNW comments at 40; Rural Tel. Coalition comments at 21.

in substantial wholesale discounts.[2111] AT&T argues that a discount that does not permit viable competition should be presumed unreasonable.[2112] Cable & Wireless and the Telecommunications Resellers Ass'n point out that resale will be a particularly important market entry strategy for small businesses that cannot afford the investments necessary to construct their own facilities or purchase unbundled elements.[2113]

882. Incumbent LECs, cable companies, CAPs, and Sprint generally argue for low wholesale discounts.[2114] Facility-based competitors and potential competitors, such as MFS and cable operators, argue that we should focus our efforts on encouraging facilities-based competition. Such parties, including incumbent LECs, claim that large resale discounts will discourage the development of facilities by making it unnecessary for a new entrant to construct its own facilities in order to compete effectively on the basis of price.[2115] MFS and GTE state that wholesale pricing should only be applied in the absence of facilities-based competition and that once such competition exists, we should forbear from imposing wholesale pricing on incumbent LEC services offered for resale.[2116] Incumbent LECs, cable operators, and Sprint oppose AT&T's proposal that discounts that do not permit viable competition should be presumed unreasonable.[2117]

883. Parties favoring national rules regarding resale differ as to the form such rules should take. Some propose that we establish a methodology for calculating avoided costs. For

[2111] *See, e.g.*, AT&T reply at Appendix E (Avoided Cost Model); Cable & Wireless comments at 38.

[2112] AT&T comments at 85.

[2113] Cable & Wireless at 35; Telecommunications Resellers Ass'n at 15. The Competition Policy Institute similarly argues that resale will bring both large and small (resale) carriers into the market. Competition Policy Institute comments at 24.

[2114] *See, e.g.*, GTE reply at 25-26; NYNEX comments at 40-41; NCTA comments at 23; TCI comments at 8; MFS reply at 34-36, Sprint reply at 41.

[2115] *See, e.g.*, NCTA comments at 29-30; Comcast comments at 21; Cox comments at 32; Time Warner comments at 70; MFS comments at 72; U S West comments, Exhibit A (Federal Implementation of the Telecommunications Act of 1996) at 26; BellSouth comments at Attachment (Interconnection and Economic Efficiency), p. 19; Bell Atlantic comments at Attachment (Declaration of Robert W. Crandall), pp. 4-5.

[2116] This forbearance would be pursuant to 47 U.S.C. § 160. MFS comments at 72 n.80; GTE reply at 26 n.44.

[2117] *See, e.g.*, Bell Atlantic reply at 24; Time Warner reply at 22; Sprint reply at 40.

example, certain parties advocate a rule requiring the use of long-run incremental cost.[2118] Others advocate some form of proxies or presumptions to determine avoided costs. NEXTLINK argues that the Commission should establish a uniform set of presumptions regarding the types of costs that are to be avoided and require that calculations of avoided costs be based on publicly available sources.[2119] NEXTLINK contends that these requirements would allow rapid identification of avoided costs and should lead to the development of presumptive percentage discounts that will apply to retail rates.[2120]

884. Incumbent LECs and MFS also argue that "avoided" costs are those that are actually avoided by such carriers instead of costs that are theoretically "avoidable."[2121] GTE argues that an "avoidable" standard improperly measures avoided costs in the long run versus actually avoided costs.[2122] IXCs and resellers argue that the standard should be "avoidable" costs; otherwise, incumbent LECs will be able to game their accounting systems and business practices to minimize actually "avoided" expense.[2123]

885. A number of parties propose that this Commission specify various USOA accounts as avoided costs.[2124] Several parties introduced models or studies that use accounting data to calculate wholesale discounts. These proposals are summarized in detail in the next section.

[2118] *See, e.g.*, GSA/DoD comments at 11.

[2119] NEXTLINK comments at 33.

[2120] *Id.* Also, the Telecommunications Resellers Ass'n advocates establishing a minimal discount, to which states may add, but not delete, unless they petition the FCC for express exemption. Telecommunications Resellers Ass'n comments at 24-25.

[2121] *See, e.g.*, GTE reply at 25-26; NYNEX comments at 81; SBC reply at 15 n.35; USTA reply at 30; MFS comments at 72.

[2122] *See* Rebuttal Testimony of Douglas E. Wellemeyer, *Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks*, R. 93-04-003 and I. 93-04-002 (California Commission July 10, 1996), submitted as attachment to Letter from Whitney Hatch, Assistant Vice President--Regulatory Affairs, GTE, to John Nakahata, Senior Legal Advisor, Chairman Reed E. Hundt, FCC, July 18, 1996.

[2123] *See, e.g.*, AT&T comments at 84 n.129; Cable & Wireless reply at 29.

[2124] *See* AT&T comments at 83-84 n.130-131; GCI comment at 15; MCI comments at Attachment 2 (Pricing of Wholesale Services); TCC comments at 45-46; Telecommunications Resellers Ass'n comments at 25-26; Sprint comments at Appendix C. While not providing specific USOA accounts, several parties encourage the Commission to identify these accounts. *See, e.g.*, ACSI comments at 61.

886. Some parties recommend that we adopt a specific percentage discount from the retail rate. For example, the Massachusetts Attorney General recommends an interim discount of 25 percent until carrier-specific cost studies can be performed.[2125] ACTA suggests that we adopt a 25 percent discount as a national standard.[2126] Several cable interests recommend ten percent maximum discounts, at least until avoided cost studies can be performed.[2127] The Telecommunications Resellers Association suggests that discounts in the range of 30 to 50 percent off the retail rate are necessary to allow resellers to provide competition.[2128] AT&T argues that, whatever discount is selected, states should be allowed to increase it to promote competition.[2129] Furthermore, AT&T argues that states should be allowed to impose penalties in the form of increased discounts for failure to provide service of equivalent quality offered to incumbent LEC customers or to provide electronic interfaces to the incumbent LEC network.[2130] Incumbent LECs and MFS argue that the 1996 Act does not authorize the service quality penalties or competition-enhancing increased discounts suggested by AT&T.[2131]

887. MFS, Teleport, Time Warner, the Massachusetts Commission, and a number of incumbent LECs argue that joint, common, and overhead costs should not be included in the calculation of avoided costs.[2132] They argue that these costs are not avoided because they will continue to be incurred in providing wholesale service. AT&T, MCI, and others favor inclusion of a portion of joint, common, and overhead costs in avoided costs because these costs will decrease as the overall level of operations of an incumbent LEC decrease (as a result of

[2125] Mass. Attorney General comments at 24.

[2126] ACTA comments at 31-32.

[2127] *See, e.g.*, Comcast comments at 21; NCTA comments at 41.

[2128] Telecommunications Resellers Ass'n comments at 24.

[2129] AT&T comments at 84.

[2130] *Id.* at 84-85.

[2131] *See, e.g.*, MFS reply at 36; Bell Atlantic reply at 24; Sprint reply at 42.

[2132] *See, e.g.*, MFS comments at 74; Teleport comments at 56-57; Time Warner comments at 77; Mass. Commission comments at 14-15; Ameritech comments at 80; BellSouth comments at 67; Cincinnati Bell comments at 35; GTE comments at 51; Lincoln Tel. reply at 8; U S West comments at 68-69; PacTel comments at 90; Rural Tel. Coalition reply at 15; USTA comments at Attachment (Affidavit of Jerry A. Hausman), p. 11.

downscaling their retail operations).[2133]

888. There is significant disagreement about whether wholesale rates should take into account any additional costs incumbent LECs incur in providing wholesale service, such as those relating to wholesale marketing and billing operations. Incumbent LECs, facilities-based competitors, Sprint, and others argue that wholesale rates must include such costs to ensure recovery from the cost-causing parties -- resellers.[2134] Some incumbent LECs note that these additional costs could also be recovered through a separate charge.[2135] IXCs and resellers argue that the plain language of the section 252(d)(3) does not provide for the recognition of these costs.[2136] They also add that allowing incumbent LECs to recover these costs from resellers discourages efficiency in their wholesale operations.[2137]

889. A number of incumbent LECs oppose application of a single percentage discount rate for all services, arguing that avoided costs will vary among different services.[2138] Some state commissions also recommend against adoption of a uniform rate.[2139] MFS argues that, because section 252(d)(3) refers to retail rates charged to subscribers "for the telecommunications service requested," a uniform wholesale discount rate would frustrate Congressional intent.[2140] Advocates of a uniform discount, however, contend that incumbent LECs will be able to game any system involving a nonuniform allocation of avoided cost, because the information regarding such costs

[2133] *See, e.g.*, TCC comments at 45-46; AT&T reply at Appendix E (Avoided Cost Model); MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 9; Texas Public Utility Counsel comments at 45-46.

[2134] *See, e.g.*, Ameritech comments at 80; Bell Atlantic comments at 44-45; BellSouth comments at Attachment (Interconnection and Economic Efficiency), p. 20; Citizens Utilities comments at 25; USTA comments at Attachment (Affidavit of Jerry A. Hausman), p.12, reply at 29; MFS comments at 73-74; Teleport comments at 57; Time Warner comments at 78; Ohio Commission comments at 59-60, 66; Sprint comments at 72; J. Staurulakis comments at 10.

[2135] *See, e.g.*, BellSouth comments at 67; NYNEX comments at 83.

[2136] *See, e.g.*, AT&T reply at 10; LDDS reply at 45; TCC comments at 47; Cable & Wireless reply at 28-29; Telecommunications Resellers Ass'n reply at 18.

[2137] LDDS reply at 45. LDDS argues that such costs should be recovered in a competitively-neutral manner. *Id.*

[2138] *See, e.g.*, Bell Atlantic comments at 46; USTA comments at 74-75; MFS comments at 73.

[2139] *See, e.g.*, California Commission comments at 37-38.

[2140] MFS comments at 73.

is under their control.[2141] Advocates of a uniform discount also argue that apportioning avoided costs over specific services can be difficult, while a uniform rate is simple to apply. Ameritech argues that the wholesale rate structure of an incumbent LEC should not mirror its retail rate structure. Rather, it should be based on a weighted average of all retail rates provided by the incumbent LEC, less avoided cost.[2142]

3. The Models and Study

890. MCI and AT&T introduced models, and Sprint submitted a study for calculating wholesale rates. This section describes each of these proposals and summarizes the criticisms directed against them. AT&T and MCI offer models which, they contend, can be used to generate discount rates for each incumbent LEC's retail offerings. As an example of the avoided cost approach Sprint advocates, Sprint submits a study based on its United Telephone subsidiary operations in Tennessee.[2143]

891. MCI's model uses publicly available USOA data.[2144] MCI analyzes three categories of avoided cost: (1) marketing, billing, and collection costs; (2) "other costs"; and (3) common costs allocated to avoided cost activities. MCI identifies the following USOA accounts as avoided marketing, billing, and collection costs:

Account 6611 (product management)
Account 6612 (sales)
Account 6613 (product advertising)
Account 6621 (call completion services)
Account 6622 (number services)
Account 6623 (customer services)
Account 6722 (external relations)
Account 6727 (research and development)

[2141] *See, e.g.*, Cable & Wireless comments at 47; TCC comments at 47, Telecommunications Resellers Ass'n reply at 18-19; NEXTLINK comments at 33.

[2142] Ameritech comments at 58. For example, this would average various time-of-day plans and usage plans.

[2143] Sprint comments at Appendix C (Avoided Cost Study: Tennessee United Telephone–S.E., Inc.).

[2144] MCI comments at Attachment 2 (Pricing of Wholesale Services).

MCI treats as "other" avoided costs all of the expenses recorded in the following accounts:

Account 6113 (aircraft expense)
Account 6341 (large PBX expense)
Account 6351 (public telephone terminal equipment expense)
Account 6511 (property held for future telecommunications use)
Account 6512 (provisioning expense)
Account 6562 (depreciation expense--property held for future telecommunications use)
Account 6564 (amortization expense--intangible)

MCI's model also allocates to avoided cost activities a portion of the general overhead and general support expenses recorded in the following accounts:

general overhead
Account 6711 (executive)
Account 6712 (planning)
Account 6721 (accounting and finance)
Account 6723 (human resources)
Account 6724 (information management)
Account 6725 (legal)
Account 6726 (procurement)
Account 6728 (other general and administrative)
Account 6790 (provision for uncollectible notes receivable)

general support
Account 6121 (land and building expense)
Account 6122 (furniture and artworks expense)
Account 6123 (office equipment expense)
Account 6124 (general purpose computers expense)

MCI uses an iterative process to determine separate avoided cost percentages for general overhead costs and for general support costs.[2145] The resulting percentages are based on the relative ratios

[2145] The formulae used by MCI in calculating certain overhead and general support costs are dependent on variables affected by the result of the calculation of such costs. Iteration is a means of solving for variables in such circumstances.

of avoided costs to total operating expense.[2146] MCI's model assumes that incumbent LECs incur no additional expenses in providing wholesale services.

892. After total avoided costs are determined, MCI subtracts the total avoided costs from total operating expenses to derive total wholesale expenses. MCI then calculates wholesale service revenue using a formula that allows the incumbent LEC the same proportional mark-up above costs on wholesale services as on its retail services.[2147] The formula sets the ratio of total revenue less total expenses to total revenue (retail markup) equal to the ratio of wholesale revenue less wholesale expenses to wholesale revenues (allowable wholesale markup) then computes wholesale revenue (and rates) by solving for that variable in a simple equation.[2148] MCI computes a wholesale discount rate as one minus the ratio of wholesale revenue over total revenue. Wholesale rates are computed by reducing retail rates by the wholesale discount.

893. MCI proposes that states use its model to calculate a single wholesale discount rate for each incumbent LEC that would apply in every state in which that incumbent LEC does business and for all services the incumbent LEC provides for resale. States would apply that rate

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[2146] Total Avoided Expense = [Not Avoided Expenses * 0%] + [Totally Avoided Expenses * 100%] + [Partially Avoided Expenses * a%] + [Partially Avoided Expenses * b%]

Where:

$$a = \%\ \text{Corporate Operations Avoidable} = \frac{\text{Total Avoided Expenses}}{\text{Total Expenses - Depreciation \& Amortization Expense}}$$

$$b = \%\ \text{General Support Avoidable} = \frac{\text{Total Avoided Expenses}}{\text{Total Expenses - General Support}}$$

[2147] $$\text{Wholesale Price Discount} = 1 - \frac{\text{Wholesale Service Revenue}}{\text{Total Operating Revenue}}$$

Where:

$$\text{Wholesale Service Revenue} = \frac{\text{Total Wholesale Expenses}}{(1 - \text{Base Margin})}$$

Total Wholesale Expenses = Total Operating Expenses - Total Avoided Costs

$$\text{Base Margin} = \frac{\text{Total Operating Revenue - Total Operating Expenses}}{\text{Total Operating Revenue}}$$

[2148] $$\frac{\text{Retail Revenue - Total Expenses}}{\text{Retail Revenue}} = \frac{\text{wholesale revenue - (total expenses - avoided expenses)}}{\text{wholesale revenue}}$$

$$\text{Wholesale Revenue} = \text{Retail Revenue} - \left[\text{Avoided expenses} \times \left[\frac{\text{Retail Revenue}}{\text{Total Expenses}}\right]\right]$$

This is as compared to: Wholesale Revenue = Retail Revenue - Avoided Expenses

to each of the incumbent LECs' retail services. For the seven BOCs and GTE, MCI's calculated wholesale discount factors range from 25 to 35 percent.[2149] MCI suggests that its study be declared presumptively valid by the Commission, but suggests that the Commission allow states to adopt a different resale discount by showing that the model does not produce an accurate result.[2150]

894. Sprint, several incumbent LECs, and potential facilities-based entrants, criticize the MCI model. Lincoln Telephone faults the underlying MCI study for relying on a sample of only eight companies, arguing that the limited sample does not capture the variety of billing, costing and collecting arrangements of all existing carriers.[2151] Several incumbent LECs, although not criticizing the MCI study specifically, oppose any approach that utilizes USOA accounts,[2152] or calculates the resale discount by deducting avoidable, as opposed to actually avoided, costs.[2153] Others attack MCI's method of computing wholesale rates once avoided costs are measured.[2154] MFS argues that there is no statutory basis for MCI's use of a formula that removes the markup associated with avoided retail expenses from the retail rates.[2155]

895. AT&T's avoided cost model is similar to MCI's model in that it is an embedded cost approach that starts with publicly-available accounting data.[2156] AT&T's model, however, involves several additional layers of calculations. The model assigns incumbent LEC Automated Record Management Information Systems (ARMIS) revenue and expense data to five lines of business (units). For the local business unit, which it uses as the applicable unit for resale under section 251(c)(4), avoidable expenses are computed by USOA account. AT&T argues that all of

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[2149] MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 12.

[2150] MCI comments at 90.

[2151] Lincoln Tel. comments at 8-9.

[2152] *See, e.g.*, BellSouth reply at 41; PacTel reply at 45-46.

[2153] *See, e.g.*, SBC reply at 15; NYNEX reply at 40; Ameritech reply at 37-39.

[2154] MFS reply at 36.

[2155] *Id.* This was also a point debated by incumbent LECs in various state proceedings. *See, e.g., Petition for a Total Local Exchange Wholesale Service Tariff from Illinois Bell Telephone Company*, Nos. 95-0458 and 95-0531 (consol.) (Illinois Commission June 26, 1996) at 5-20. Teleport argues that the Illinois Commission's decision to include a portion of profit contribution was incorrect. Teleport comments at 59.

[2156] AT&T reply at Appendix E (Avoided Cost Model).

the costs associated with the following USOA accounts categories should be excluded as avoided costs, many of which are summary accounts and subsume a set of other accounts:

Account 5300 (uncollectibles)
Account 6220 (operator systems expense) (if appropriate)
Account 6533 (testing expense)
Account 6534 (plant operations administration expense)
Account 6610 (marketing expense)
Account 6620 (customer service expense)

AT&T further argues that the portion of the following USOA accounts associated with the incumbent LEC's retail operations should be excluded as avoided costs:

Account 6110 (network support expense)
Account 6120 (general support expense)
Account 6560 (depreciation expense)
Account 6710 (executive and planning expense)
Account 6720 (general and administrative expense)
Account 7240 (operating other taxes)
Account 7540 (other interest deductions)

AT&T also recommends partial avoidance of "Total Returns," which refers to portions of the retail rate that contributes to an incumbent LEC's earnings. Ultimately, under AT&T's model, the sum of avoided direct and indirect retail costs is divided by the local service-related revenues to derive the avoided cost discount. AT&T applies its model to each state, with the exception of Alaska, and derives discount rates that range from 23 percent to nearly 56 percent. Parties did not have an opportunity to comment specifically on the AT&T model during the pleading cycle of this proceeding because it was submitted with AT&T's reply. However, AT&T identified in its initial comments the list of fully and partially avoided USOA accounts that were ultimately used in its model. Criticisms of these classifications of fully and partially avoided costs are discussed below.

896. Sprint submits a sample study of its LEC subsidiary operations in Tennessee as an example of how the avoided cost approach advocated by Sprint would be applied.[2157] It was undertaken at the request of the Tennessee Commission to be used under the 1996 Act for calculating wholesale costs. Specifically, the study examines rates for resale of bundled services, focusing on those categories of costs defined in the 1996 Act (marketing, billing, collection, and other costs). Sprint describes its study as employing an activity-based cost approach that identifies the avoided cost by cost category and assigns these costs to service groups, based on a computed factor that assigns each specific type of expense to the activity that creates or drives

[2157] Sprint comments at Appendix C (Avoided Cost Study: Tennessee United Telephone--S.E., Inc.).

that expense. Sprint does not provide the worksheets detailing this cost assignment because Sprint considers the worksheets to be proprietary. Costs are identified at the subaccount level. Sprint computes the percentage of avoided costs of providing simple access service at wholesale as a percentage of simple access revenue to be 4.76 percent. Sprint computes a 7.19 percent figure for other services. In its reply comments, Sprint suggests that the AT&T and MCI models significantly overstate incumbent LEC avoided costs.

897. Parties also commented on the specific USOA accounts that should be used to identify avoided costs. We summarize below the comments with respect to the various accounts:

Marketing expenses--Account 6611 (product management), Account 6612 (sales), and Account 6613 (product advertising):

Resellers and most IXCs, other than Sprint, all support identification of these accounts as completely avoidable, both because they are explicitly mentioned in the 1996 Act and because these expenses would not be necessary in a wholesale operation.[2158] Incumbent LECs, Sprint, MFS, and Time Warner argue that expenses recorded in these accounts would, in fact, be incurred in connection with the provision of wholesale services such as marketing to wholesalers.[2159]

Services expenses--Account 6621 (call completion services), Account 6622 (number services), and Account 6623 (customer services):

IXCs and resellers contend that all of the expenses recorded in these accounts should be treated as avoidable costs because a reseller will either purchase these services separately or provide them itself.[2160] Incumbent LECs and Sprint argue that these services have no relation to local retail service and therefore cannot be included in avoided costs used to compute wholesale local service rates.[2161]

[2158] *See, e.g.*, Cable & Wireless comments at 46 n.77; Telecommunications Resellers Ass'n comments at 25-26; AT&T comments at 84 n.130; CompTel comments at 96-97; MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 5-6.

[2159] *See, e.g.*, Ameritech reply at 38; Bell Atlantic reply at 23; GTE reply at 25 n.40; MFS reply at 35; Time Warner reply at 21; USTA reply at 30; Sprint reply at 38.

[2160] *See, e.g.*, AT&T comments at 84 n.130; MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 6; Cable & Wireless comments at 46 n.77; Telecommunications Resellers Ass'n comments at 25-26. CompTel states that such accounts should be avoided where appropriate. CompTel comments at 96-97.

[2161] *See, e.g.*, Bell Atlantic reply at 23 (with respect to account 6623); USTA reply at 30 (account 6623 includes costs devoted to customer service relating to interexchange service); Sprint reply at 38-39 (also identifies account 6623 as relating to separately billed services). PacTel agrees that costs of directory

Information origination/termination expenses and other property, plant and equipment expenses--Account 6341 (large PBX expense), Account 6351 (public telephone terminal equipment expense), Account 6511 (property held for future telecommunications use), and Account 6512 (provisioning expense):

MCI and Cable & Wireless identify accounts 6341 (large PBX expense), 6351 (public telephone terminal equipment expense), 6511 (property held for future telecommunications use) and 6512 (provisioning expense) as completely avoidable,[2162] while incumbent LECs, MFS and Sprint argue that these expenses are not associated with retail activities.[2163]

Account 6220 (operator systems expense):

AT&T, TCC, and GCI argue that this account is wholly avoidable where resellers choose not to purchase operator services[2164] while Sprint argues that the account is unrelated to local service.[2165]

Account 6790 (provision for uncollectible notes receivable)/5300 (uncollectible revenue):

AT&T, TCC, and GCI argue that the sum recorded in account 5300 represents a revenue offset that is wholly avoidable.[2166] MCI chooses to measure uncollectibles using account 6790, arguing that expenses in this account are partially avoidable.[2167] Sprint and Time Warner disagree with the contention that uncollectibles are avoidable at all, claiming that uncollectibles may actually increase in a wholesale operation.[2168]

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assistance call allowances, directory listing, and telephone directories will continue to be incurred. PacTel reply at 46.

[2162] MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 8; Cable & Wireless comments at 46 n.77.

[2163] MFS reply at 35-36; Sprint reply at 38; GTE reply at 25 n.40 (at least with respect to accounts 6341 and 6351).

[2164] AT&T reply at Appendix E (Avoided Cost Model); TCC comments at 45 n.45; GCI comments at 1.

[2165] Sprint reply at 38.

[2166] AT&T comments at 84 n.130; AT&T reply, Appendix E (Avoided Cost Model); TCC comments at 45 n.45; GCI comments at 1.

[2167] MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 9.

[2168] Sprint reply at 37; Time Warner reply at 21.

Network support expenses (Accounts 6112-6116):

AT&T, TCC, GCI, and the Telecommunications Resellers Association assert that all of these accounts are partially avoidable.[2169] MCI only discusses account 6113 (aircraft expense), identifying it as completely avoidable because it is not related to wholesale services.[2170] Sprint and MFS disagree, arguing that there is no evidence that costs in these accounts will decrease with wholesale offerings because these expenses will have to continue to be incurred.[2171]

General support expenses (Accounts 6121-6124) and Account 6711 (executive), Account 6712 (planning), and Accounts 6721-6728 (general and administrative expenses):

Resellers and IXCs contend that the shared expenses recorded in these accounts are partially avoidable.[2172] MCI and Cable & Wireless identify accounts 6722 (external relations) and 6727 (research and development) as completely avoidable.[2173] MCI argues that overhead costs support all of the activities, including the activities that are avoided when services are sold at wholesale. Therefore, according to MCI, a portion of overhead expenses must be treated as avoided cost.[2174] AT&T argues that wholesaling will necessarily lead to an overall reduction in the size of an incumbent LEC's operations and thus to a reduction in shared expenses.[2175] Sprint and Time Warner argue that there is no evidence to support a conclusion that resale will lead to a general reduction in shared expenses.[2176]

[2169] AT&T comments at 84 n.131; TCC comments at 46 n.46; GCI comments at 1; Telecommunications Resellers Ass'n comments at 25-26.

[2170] MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 8.

[2171] MFS reply at 35 (only discusses account 6113); Sprint reply at 39-40.

[2172] *See, e.g.*, Telecommunications Resellers Ass'n comments at 25-26; AT&T comments at 84 n.131.

[2173] MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 6-7; Cable & Wireless comments at 47 n.79.

[2174] MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 9.

[2175] AT&T reply, Appendix E (Avoided Cost Model) at 2.

[2176] Sprint reply at 39-40; Time Warner reply at 21

Depreciation and amortization expenses (Accounts 6561-6565) and operating taxes (Accounts 7220-7240):

Resellers and IXCs also argue to varying degrees that such expenses are partially avoidable.[2177] MCI and Cable & Wireless argue for the complete avoidance of accounts 6562 (depreciation expense--property held for future telecommunications use) and 6564 (amortization expense--intangible).[2178] MFS, Sprint, and Time Warner argue that these costs will continue to be incurred for wholesale operations.[2179]

Other partially avoided accounts:

AT&T, TCC, and GCI argue that accounts 6533 (testing expenses), 6534 (plant operations administration expense), and 7540 (other interest), and total returns are partially avoidable[2180] while Sprint disagrees.[2181]

4. State Decisions

898. Several state commissions have already made interim or final determinations with respect to wholesale rates. Some, like the California and Maryland commissions, did not purport to apply or interpret the 1996 Act. Others, including the Illinois and Georgia commissions, explicitly applied section 252(d)(3) in reaching their decisions. Post-1996 Act state decisions announced to date are summarized below.

899. *California:* The California Commission adopted interim rules, effective March 31, 1996, for the resale of local exchange services by competitive LECs within the areas served by Pacific and GTE.[2182] Although the record in that proceeding was closed before the passage of the 1996 Act, the California Commission applied a "retail rates minus avoided cost" standard similar

[2177] *See, e.g.*, Telecommunications Resellers Ass'n comments at 25-26; AT&T comments at 84 n.131; CompTel comments at 97.

[2178] MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 9; Cable & Wireless comments at 47 n.79.

[2179] MFS reply at 35-36 (account 6564 is not related to retail); Sprint reply at 39-40; Time Warner reply at 21.

[2180] AT&T comments at 84 nn.130-31; TCC comments at 46 n.46; GCI comments at 1. Sprint does not comment on account 7540.

[2181] Sprint reply at 39-40.

[2182] *Order Instituting Rulemaking on the Commission's Own Motion into Competition for Local Exchange Service*, R. 95-04-043 and I. 95-04-044 (California Commission April 26, 1996). Although the final order was not issued until April 26, 1996, it became effective March 31, 1996.

to that contained in section 252(d)(3) for purposes of setting interim rates. The California Commission used an embedded cost study and USOA accounting data to calculate business discounts rates of 17 percent for PacTel and 12 percent for GTE. Because it had previously found that residential rates were already below direct embedded cost, the California Commission applied to residential services a reduced discount rate of 10 percent for PacTel and 7 percent for GTE. In arriving at this conclusion, the California Commission considered uncollectibles, marketing, and customer service expenses to be partially avoidable, to varying degrees.

900. *Colorado:* The Colorado Commission established a business discount rate of 16 percent and a residential discount rate of 9 percent.[2183] Using Colorado-specific embedded cost information previously filed by U S West as part of an annual report to that commission, the Colorado Commission calculated avoided costs for five categories of services. The Colorado Commission treated the following costs as totally avoided: uncollectibles; direct expense associated with operator services; customer operations (product management, sales, and product advertising); call completion; and number services. The Colorado Commission also considered 95 percent of the costs of customer services to be avoidable. General purpose computer expense and related depreciation, and general corporate overheads, were treated as partially avoided. The Colorado Commission concluded that wholesale discounts should be as follows: residential, 9 percent; business, 16 percent; toll services, 30 percent; central office-based features, 50 percent; all other services, 18 percent.

901. *Georgia:* The Georgia Commission established a 20.3 percent discount rate for wholesale residential service and a 17.3 percent discount rate for wholesale business service.[2184] The Georgia Commission used embedded cost information to calculate avoided direct expenses. The Georgia Commission also found that a percentage of general support, administrative, and corporate operations expenses should be considered avoided costs. In computing its final discounts, the Georgia Commission apportioned total avoided expense between residential and business services according to BellSouth's revenues for the two categories. Prior to such apportionment, the Georgia Commission's discount was 18.74 percent.

902. *Illinois:* The Illinois Commission released an order on June 26, 1996, setting wholesale discount rates for Ameritech and Centel local exchange services.[2185] The Illinois Commission applied the section 252(d)(3) pricing standard, but rejected use of embedded cost

[2183] *U S West Communications, Inc. Filing Advice Letter No. 2610 in Compliance with Commission Decision No. C96-521 Adopting Emergency Rules*, Docket No. 96S-233T (Colorado Commission June 21, 1996).

[2184] *Petition of AT&T for the Commission to Establish Resale Rules, Rates, Terms, and Conditions and Initiate Unbundling of Services*, Docket No. 6352U (Georgia Commission June 21, 1996).

[2185] *Petition for a Total Local Exchange Wholesale Service Tariff from Illinois Bell Telephone Company*, Nos. 95-0458 and 95-0531 (consol.) (Illinois Commission June 26, 1996).

studies as inconsistent with the Commission's established cost of service rules. Instead, the Illinois Commission based its analysis on a methodology that begins with retail rates, then subtracts: (1) the "total assigned cost" of retail functions; and (2) a *pro rata* share of contribution attributable to the avoided retail costs. Total assigned costs include the long-run incremental costs of a service plus some shared and administrative costs. Contribution is the difference between retail price and long-run incremental cost. The Illinois Commission expects that this methodology, when applied to individual Ameritech services using the carrier's most recently-filed cost studies, will produce an average discount rate of 20.07 percent.[2186] The Illinois Commission applied the same rate to Centel, pending completion by Centel of the cost studies needed to apply the Illinois Commission's adopted methodology.

903. *Louisiana:* The Louisiana Commission established regulations concerning resale of telecommunications services on March 15, 1996.[2187] As an interim measure, until the Louisiana Commission can determine wholesale rates based on TSLRIC cost studies, the commission has set wholesale rates at the incumbent LEC's current tariffed retail rates minus 10 percent. This calculation reflects the incumbent LEC's avoidance of retail costs, including but not limited to, sales, marketing and customer services associated with the resold items.

904. *Maryland:* The Maryland Commission adopted, without analyzing cost studies, an interim discount rate of 10 percent, pending completion of the instant rulemaking proceeding.[2188]

905. *New York:* The New York Commission established temporary wholesale discounts for NYNEX and Rochester Telephone on July 18 of this year.[2189] The New York Commission calculates for NYNEX a 17 percent discount for residential service and an 11 percent discount for business service. Separate avoided cost percentages were derived for different shared expense categories, ranging from five percent for general and administrative expenses to 12.7 percent for

[2186] The Illinois Commission notes that the pricing methodology that it adopted would yield an average discount of 20.07 percent if applied at the individual service level and 16.63 percent if applied to the "family" service level. *Id.* at 10. Illinois decided that the individual service application avoided certain pricing anomalies and was more consistent with the 1996 Act. *Id.* at 20.

[2187] *In re: Regulations for Competition in the Local Telecommunications Market*, Docket U-200883 (Louisiana Commission March 15, 1996).

[2188] *Wholesale Rates for Telecommunications Services Ruling on AT&T's Petition for a Reduction on the Wholesale Rates of Bell Atlantic–Maryland, Inc.*, Case No. 8721 (Maryland Commission June 27, 1996).

[2189] *Joint Complaint of AT&T Communications of New York, Inc., MCI Telecommunications Corporation, WorldCom, Inc. d/b/a LDDS WorldCom and the Empire Association of Long Distance Telephone Companies, Inc. Against New York Telephone Company Concerning Wholesale Provisioning of Local Exchange Service by New York Telephone Company and Sections of New York Telephone's Tariff No. 900*, Case 95-C-0657 (New York Commission July 18, 1996); *Petition of Rochester Telephone Corp. for Approval of a Proposed Restructuring Plan*, Case 93-C-0103 (New York Commission July 18, 1996).

network support expense. For marketing categories, 20 percent of product management, 50 percent of sales, and 50 percent of advertising expenses were considered avoidable. All uncollectibles were considered avoidable. Calculating these and other avoided costs, the New York Commission arrived at a 15 percent discount. Because the New York Commission observed that business lines produce higher overall revenue and thus artificially inflate avoided cost for business lines (and undervalue the avoided cost for residential lines), a 17 percent discount was set for residential service while only an 11 percent discount was set for business service. A uniform 13.5 percent discount was ordered for Rochester Telephone, based on a New York Commission analysis of Rochester's 1995 annual report, using principles similar to those applied to NYNEX.

906. *Ohio*: The Ohio Commission has established rules for pricing wholesale services for resale, but has not publicly released calculations of specific discounts for particular services.[2190] The Ohio Commission established a presumption that all expenses contained in the following USOA accounts will be avoided: 5300 (uncollectible revenue), 6611 (product management), 6612 (sales), 6613 (product advertising), 6621 (call completion service), 6622 (number services expense), and 6623 (customer service).[2191] The Ohio Commission's rules require resellers seeking to avoid additional costs to prove that such costs would be avoided in wholesale operations. Beyond the avoided expenses discussed above, the Ohio Commission requires avoided costs to include "direct and indirect costs of all activities eliminated due to the wholesale provisioning."

5. Discussion

907. Resale will be an important entry strategy for many new entrants, especially in the short term when they are building their own facilities. Further, in some areas and for some new entrants, we expect that the resale option will remain an important entry strategy over the longer term. Resale will also be an important entry strategy for small businesses that may lack capital to compete in the local exchange market by purchasing unbundled elements or by building their own networks. In light of the strategic importance of resale to the development of competition, we conclude that it is especially important to promulgate national rules for use by state commissions in setting wholesale rates. For the same reasons discussed in Section II.D of the Order, we believe that we have legal authority under the 1996 Act to articulate principles that will apply to the arbitration or review of wholesale rates. We also believe that articulating such principles will promote expeditious and efficient entry into the local exchange market. Clear resale rules will create incentives for parties to reach agreement on resale arrangements in voluntary negotiations. Clear rules will also aid states in conducting arbitrations that will be administratively workable

[2190] *Commission Investigation Relative to the Establishment of Local Exchange Competition and Other Competitive Issues*, Case No. 95-845-TP-COI (Ohio Commission June 12, 1996).

[2191] The Ohio Commission also lists account 6610, which is the summary account for marketing expenses (accounts 6611-6613).

and will produce results that satisfy the intent of the 1996 Act. The rules we adopt and the determinations we make in this area are crafted to achieve these purposes. We also note that clear resale rules should minimize regulatory burdens and uncertainty for all parties, including small entities and small incumbent LECs.[2192]

908. The statutory pricing standard for wholesale rates requires state commissions to (1) identify what marketing, billing, collection, and other costs will be avoided by incumbent LECs when they provide services at wholesale; and (2) calculate the portion of the retail prices for those services that is attributable to the avoided costs. Our rules provide two methods for making these determinations. The first, and preferred, method requires state commissions to identify and calculate avoided costs based on avoided cost studies. The second method allows states to select, on an interim basis, a discount rate from within a default range of discount rates adopted by this Commission. They may then calculate the portion of a retail price that is attributable to avoided costs by multiplying the retail price by the discount rate.

909. We adopt a minimum set of criteria for avoided cost studies used to determine wholesale discount rates. The record before us demonstrates that avoided cost studies can produce widely varying results, depending in large part upon how the proponent of the study interprets the language of section 252(d)(3). The criteria we adopt are designed to ensure that states apply consistent interpretations of the 1996 Act in setting wholesale rates based on avoided cost studies which should facilitate swift entry by national and regional resellers, which may include small entities.[2193] At the same time, our criteria are intended to leave the state commissions broad latitude in selecting costing methodologies that comport with their own ratemaking practices for retail services. Thus, for example, our rules for identifying avoided costs by USOA expense account are cast as rebuttable presumptions, and we do not adopt as presumptively correct any avoided cost model.

910. Based on the comments filed in this proceeding and on our analysis of state decisions setting wholesale discounts, we adopt a default range of rates that will permit a state commission to select a reasonable default wholesale rate between 17 and 25 percent below retail rate levels. A default wholesale discount rate shall be used if: (1) an avoided cost study that satisfies the criteria we set forth below does not exist; (2) a state commission has not completed its review of such an avoided cost study; or (3) a rate established by a state commission before release of this Order is based on a study that does not comply with the criteria described in the following section. A state commission must establish wholesale rates based on avoided cost studies within a reasonable time from when the default rate was selected. This approach will enable state commissions to complete arbitration proceedings within the statutory time frames even if it is infeasible to conduct full-scale avoided cost studies that comply with the criteria

[2192] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

[2193] *See Id.*

described below for each incumbent LEC.

a. Criteria for Cost Studies

911. There has been considerable debate on the record in this proceeding and before the state commissions on whether section 252(d)(3) embodies an "avoided" cost standard or an "avoidable" cost standard. We find that "the portion [of the retail rate] . . . attributable to costs that will be avoided" includes all of the costs that the LEC incurs in maintaining a retail, as opposed to a wholesale, business. In other words, the avoided costs are those that an incumbent LEC would no longer incur if it were to cease retail operations and instead provide all of its services through resellers. Thus, we reject the arguments of incumbent LECs and others who maintain that the LEC must actually experience a reduction in its operating expenses for a cost to be considered "avoided" for purposes of section 252(d)(3). We do not believe that Congress intended to allow incumbent LECs to sustain artificially high wholesale prices by declining to reduce their expenditures to the degree that certain costs are readily avoidable. We therefore interpret the 1996 Act as requiring states to make an objective assessment of what costs are reasonably avoidable when a LEC sells its services wholesale. We note that Colorado, Georgia, Illinois, New York, and Ohio commissions have all interpreted the 1996 Act in this manner.[2194]

912. We find that, under this "reasonably avoidable" standard discussed above, an avoided cost study must include indirect, or shared, costs as well as direct costs. We agree with MCI, AT&T, and the California, Illinois, Ohio, Colorado, and Georgia commissions that some indirect or shared costs are avoidable and likely to be avoided when a LEC provides retail services to a reseller instead of to the end user. This is because indirect or shared costs, such as general overheads, support all of the LEC's functions, including marketing, sales, billing and collection, and other avoided retail functions. Therefore, a portion of indirect costs must be considered "attributable to costs that will be avoided" pursuant to section 252(d)(3). It is true that expenses recorded in indirect or shared expense accounts will continue to be incurred for wholesale operations. It is also true, however, that the overall level of indirect expenses can reasonably be

[2194] *See, e.g., U S West Communications, Inc. Filing Advice Letter No. 2610 in Compliance with Commission Decision No. C96-521 Adopting Emergency Rules*, Docket No. 96S-233T (Colorado Commission June 21, 1996) at paras. 12-13; *Petition of AT&T for the Commission to Establish Resale Rules, Rates, Terms, and Conditions and Initiate Unbundling of Services*, Docket No. 6352U (Georgia Commission June 21, 1996); *Petition for a Total Local Exchange Wholesale Service Tariff from Illinois Bell Telephone Company*, Nos. 95-0458 and 95-0531 (consol.) (Illinois Commission June 26, 1996) at 27-34; *Joint Complaint of AT&T Communications of New York, Inc., MCI Telecommunications Corporation, WorldCom, Inc. d/b/a LDDS WorldCom and the Empire Association of Long Distance Telephone Companies, Inc. Against New York Telephone Company Concerning Wholesale Provisioning of Local Exchange Service by New York Telephone Company and Sections of New York Telephone's Tariff No. 900*, Case 95-C-0657 (New York Commission July 18, 1996); *Petition of Rochester Telephone Corp. for Approval of a Proposed Restructuring Plan*, Case 93-C-0103 (New York July 18, 1996); *Commission Investigation Relative to the Establishment of Local Exchange Competition and Other Competitive Issues*, Case No. 95-845-TP-COI (Ohio Commission June 12, 1990) at 30-31.

expected to decrease as a result of a lower level of overall operations resulting from a reduction in retail activity.

913. A portion of contribution, profits, or mark-up may also be considered "attributable to costs that will be avoided"[2195] when services are sold wholesale. MCI's model makes this attribution by means of a calculation that applies the same mark-up to wholesale services as to retail services. The Illinois Commission achieved a similar effect by removing a *pro rata* portion of contribution from the retail rate for each service. In AT&T's model, the portion of return on investment (profits) that was attributable to assets used in avoided retail activities was treated as an avoided cost. We find that these approaches are consistent with the 1996 Act.

914. An avoided cost study may not calculate avoided costs based on non-cost factors or policy arguments, nor may it make disallowances for reasons not provided for in section 252(d)(3). The language of section 252(d)(3) makes no provision for selecting a wholesale discount rate on policy grounds. We therefore reject NCTA's argument that discount rates should be ten percent or less in order to avoid discouraging facilities-based competition, as well as AT&T's suggestion that wholesale discount rates should be set at levels that ensure the viability of the reseller's business. We also reject, for example, MCI's assertion that no external relations or research and development costs should be allowed in wholesale rates because the activities represented by those costs are contrary to the interests of the LEC competitors that purchase wholesale services.[2196] Our analysis also precludes a state commission from adopting AT&T's suggestion that an increment should be added to the base discount rate to compensate resellers for alleged deficiencies in the provisioning of services.

915. The 1996 Act requires that wholesale rates be based on existing retail rates, and thus clearly precludes use of a "bottom up" TSLRIC study to establish wholesale rates that are not related to the rates for the underlying retail services. We thus reject the suggestions of those parties that ask us to require use of TSLRIC to set wholesale rates. The 1996 Act does not, however, preclude use of TSLRIC cost studies to identify the portion of a retail rate that is attributable to avoided retail costs. TSLRIC studies would be entirely appropriate in states where the retail rates were established using a TSLRIC method. For example, the Illinois Commission calculated its wholesale rate using an avoided cost formula and long run incremental cost studies. Embedded cost studies, such as the studies used by the Georgia Commission, may also be used to identify avoided costs. Ideally, a state would use a study methodology that is consistent with the manner in which it sets retail rates.

916. We neither prohibit nor require use of a single, uniform discount rate for all of an incumbent LEC's services. We recognize that a uniform rate is simple to apply, and avoids the

[2195] 47 U.S.C. § 252(d)(3).

[2196] *See* MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 6-7.

need to allocate avoided costs among services. Therefore, our default wholesale discount is to be applied uniformly. On the other hand, we also agree with parties who observe that avoided costs may, in fact, vary among services. Accordingly, we allow a state to approve nonuniform wholesale discount rates, as long as those rates are set on the basis of an avoided cost study that includes a demonstration of the percentage of avoided costs that is attributable to each service or group of services.

917. All costs recorded in accounts 6611 (product management), 6612 (sales), 6613 (product advertising) and 6623 (customer services) are presumed to be avoidable. The costs in these accounts are the direct costs of serving customers. All costs recorded in accounts 6621 (call completion services) and 6622 (number services) are also presumed avoidable, because resellers have stated they will either provide these services themselves or contract for them separately from the LEC or from third parties. These presumptions regarding accounts 6611-6613 and 6621-6623 may be rebutted if an incumbent LEC proves to the state commission that specific costs in these accounts will be incurred with respect to services sold at wholesale, or that costs in these accounts are not included in the retail prices of the resold services.

918. General support expenses (accounts 6121-6124), corporate operations expenses (accounts 6711, 6712, 6721-6728), and telecommunications uncollectibles (account 5301) are presumed to be avoided in proportion to the avoided direct expenses identified in the previous paragraph. Expenses recorded in these accounts are tied to the overall level of operations in which an incumbent LEC engages. Because the advent of wholesale operations will reduce the overall level of operations -- for example, staffing should decrease because customer inquiries and billing and collection activity will decrease -- overhead and support expenses are in part avoided. We select the revenue offset account of 5301 rather than accounts 5300 or 6790 because account 5301 most directly represents overheads attributable to the services being resold.

919. Plant-specific and plant non-specific expenses (other than general support expenses) are presumptively not avoidable.

920. In the case of carriers designated as Class B under section 32.11 of our rules that use certain summary accounts in lieu of accounts designated in this subsection of the Order, our avoided cost study criteria shall apply to the relevant summary account in its entirety.[2197]

b. Default Range of Wholesale Discount Rates

921. Parties to this proceeding present evidence or arguments supporting wholesale discount rates ranging from 4.76 percent to 55 percent:

[2197] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

Sprint/United Telephone study	
Simple Access service:	4.76%
Other services:	7.19%
NCTA	10.0%
Comcast	10.0%
Massachusetts Attorney General	25.0%
ACTA	25.0%
MCI Model	25.6-33.2%[2198]
Telecommunications Resellers Ass'n	30.0-50.0%
AT&T Model	23.05%-55.52%[2199]

922. States applying wholesale pricing standards similar to the standards in section 252(d)(3) have set the following wholesale discounts:

California		
PacTel		
	Business	17.0%
	Residential	10.0%
GTE		
	Business	12.0%
	Residential	7.0%
Colorado		
	Residential	9.0%
	Business	16.0%
	Toll Services	30.0%
	Central Office-Based Features	50.0%[2200]
	All other services	18.0%
Georgia		
	Residential	20.3%
	Business	17.3%

[2198] MCI calculated rates based on actual accounting data for the years 1990-1995 for each RBOC and for GTE. For 1995 the rates ranged from 25.6 percent for U S West to 33.2 percent for Ameritech. MCI also calculates rates for 1996 using estimated data. MCI comments at Attachment 2 (Pricing of Wholesale Services), p. 1.

[2199] AT&T calculated separate discount rates for each RBOC study area and for SNET and GTE Hawaiian Tel.

[2200] Central office-based services are custom calling features such as speed dialing and CLASS features, such as caller ID. *U S West Communications, Inc. Filing Advice Letter No. 2610 in Compliance with Commission Decision No. C96-521 Adopting Emergency Rules*, Docket No. 96S-233T (Colorado Commission June 21, 1996) at para. 13.

Illinois	20.07%[2201]
New York	
NYNEX	
Business	17.0%
Residential	11.0%
Rochester Telephone	13.5%

923. We find unpersuasive various arguments presented by parties at the lower and higher ends of the range of possible discounts. The Sprint/United Telephone study produces unreasonably low measures of avoided costs because the study considers only avoided direct expenses in five accounts. As explained above, we interpret the statutory language providing for a wholesale price that excludes the "portion [of a retail rate] attributable to any marketing, billing, collection, and other costs that will be avoided"[2202] to include indirect as well as direct costs. The proposals of NCTA and Comcast for a maximum discount of 10 percent are premised on the view that any greater discount would unduly discourage facilities-based competition. Section 252(d)(3), however, requires wholesale prices to be set based on avoided costs, not on any policy preference for facilities-based competition. For the same statutory reason, we reject as inconsistent with section 252(d)(3) the policy arguments of the Telecommunications Resellers Association and AT&T that we should establish national wholesale discounts at levels that will ensure that resale of local exchange services is a viable business.[2203]

924. We find AT&T's model unsuitable for purposes of establishing in this proceeding a range for default wholesale discount rates. The AT&T model does in many respects satisfy the general criteria we establish above for avoided cost studies. The model, however, incorporates numerous assumptions, cost allocation factors, and studies, and because AT&T submitted its model with its reply comments, and other parties have not analyzed the model in detail. We find that we would need to develop a more complete record on the AT&T model before deciding whether to endorse it. We do not, however, preclude a state commission from considering in a wholesale rate proceeding evidence developed using this model.

925. We find that we can use MCI's model, with some modifications, along with the results of certain state proceedings, to establish a range of rates that would produce an acceptable default wholesale discount rate that reasonably approximates the amount of avoided costs that should be subtracted from the retail rate. A default rate is to be used only in three instances: (1)

[2201] The Illinois Commission requires wholesale discounts to be computed on a service-specific basis. The 20.07 percent figure represents an "average" discount using such a methodology.

[2202] 47 U.S.C. § 252(d)(3).

[2203] *See* AT&T comments at 81-86; Telecommunications Resellers Ass'n comments at 24.

in a state arbitration proceeding if an avoided cost study that satisfies the criteria we set forth above does not exist; (2) where a state has not completed its review of such an avoided cost study; (3) where a rate established by a state before the release date of this Order is based on a study that does not comply with the criteria described in the previous section. We emphasize that the default rate is to be used as an interim measure only, and should be replaced with an avoided cost study within a reasonable time. The MCI model is a reasonable attempt at estimating avoided cost in accordance with section 252(d)(3) using only publicly-available data. We find, however, that we should modify certain features of the model.

926. First, MCI treats account 6722 (external relations) and account 6727 (research and development) as avoidable costs. MCI argues that purchasers of wholesale services are competing with LECs and, therefore, should not be forced to fund regulatory activities reflected in account 6722. MCI claims that research and development are not of practical use for the services that resellers will purchase. As explained above, this type of disallowance is not contemplated by the avoided cost standard of section 252(d)(3). We therefore adjust the model to treat these costs in the same manner as other overhead expense accounts.

927. Second, MCI treats a number of accounts as "other avoided costs" on the grounds that the expenses in those accounts are not relevant to the provision of telecommunications services that an incumbent LEC currently provides.[2204] Public telephone terminal equipment expense and large PBX expense are not "avoided" precisely because they are unrelated to the retail services being discounted. We would not expect these expenses to be included in retail service rates for resold services; but if these expenses were included in retail rates, they would not be avoided when the services are purchased by resellers. The rest of MCI's "other" accounts contain costs that support all of the telecommunications services offered by the company. MCI has not shown that any of these costs are either reduced or eliminated when services are sold at wholesale. We, therefore, adjust the MCI model so as not to treat these accounts as avoidable costs.

928. Third, MCI treats accounts 6611 (product management), 6612 (sales), 6613 (product advertising), and 6623 (customer services) as costs that are entirely avoided with respect to services purchased at wholesale. We agree that a large portion of the expenses in these accounts is avoided when service is sold at wholesale. We also agree, however, with parties that argue that some expenses in these accounts will continue to be incurred with respect to wholesale products and customers, and that some new expenses may be incurred in addressing the needs of resellers as customers. No party in this proceeding has suggested a specific adjustment to the MCI model that would account for these costs of the wholesale operation. We note that, in their

[2204] Based on this rationale, MCI excludes account 6113 (aircraft expense), account 6341 (large PBX expense), account 6511 (property held for future telecommunications use expense), account 6351 (public telephone terminal equipment expense), account 6512 (provisioning expense), account 6562 (depreciation expense for property held for future telecommunications use), and account 6564 (amortization expense, intangible).

own proceedings, several states have made varying estimates concerning the level of wholesale-related expenses in these accounts. Colorado, for example, estimated that none of the costs in accounts 6611-6613 would relate to wholesale services, and that only five percent of the costs in account 6623 would be incurred in a wholesale operation.[2205] The Georgia Commission, on the other hand, decided that 25 percent of sales and product advertising expenses would continue to be incurred in the wholesale operation.[2206] Given the lack of evidence, and the wide range of estimates that have been made by these states, we find it reasonable to assume, for purposes of determining a default range of wholesale discount rates, that ten percent of costs in accounts 6611, 6612, 6613, and 6623 are not avoided by selling services at wholesale.

929. Fourth, MCI uses a complex formula to calculate the portions of overhead and general support expense that are attributable to avoided costs. We find that this formula is constructed in a way that tends to inflate the results of the calculation. We have, therefore, substituted a more straightforward approach in which we apply to each indirect expense category the ratio of avoided direct expense to total expenses. We also identify a slightly different list of accounts representing indirect costs than that proposed by MCI.

930. With the modifications described above, and using actual 1995 data, MCI's model produces the following results for the RBOCs and GTE:

U S West	18.80%
GTE	18.81%
BellSouth	19.20%
Bell Atlantic	19.99%
SBC	20.11%
NYNEX	21.31%
Pacific	23.87%
Ameritech	25.98%

931. We also take into account the experience of those state commissions, Illinois and Georgia, that have undertaken or approved detailed avoided cost studies under the pricing standard of section 252(d)(3) of the 1996 Act. Applying the statutory standard to the examination of significant cost studies, those commissions derived average wholesale discounts of

[2205] *U S West Communications, Inc. Filing Advice Letter No. 2610 in Compliance with Commission Decision No. C96-521 Adopting Emergency Rules*, Docket No. 96S-233T (Colorado Commission June 21, 1996) at para. 12 and n.20. The Colorado Commission explained that it chose 5 percent because "some small portion of customer services will remain for the interfaces of Operational Support Systems of [U S West] and the resellers, but nowhere near the amount necessary for direct customer contact services." *Id.* n.20.

[2206] *Petition of AT&T for the Commission to Establish Resale Rules, Rates, Terms, and Conditions and Initiate Unbundling of Services*, Docket No. 6352U (Georgia Commission June 21, 1996) at Appendix 1. The Georgia Commission characterized its calculations with respect to sales expense as "conservative at best."

18.74 percent[2207] and 20.07 percent. We find that these decisions present evidence of an appropriate wholesale discount that should be given more weight than state commission decisions that have set their discounts under other pricing standards or only on an interim basis.[2208]

932. Accordingly, based on the record before us, we establish a range of default discounts of 17-25 percent that is to be used in the absence of an avoided cost study that meets the criteria set forth above. A state commission that has not set wholesale prices based on avoided cost studies that meet the criteria set forth above as of the release date of this Order shall use a default wholesale discount rate between 17 and 25 percent. A state should articulate the basis for selecting a particular discount rate. If this default discount rate is used, the state commission must establish wholesale rates based on avoided cost studies within a reasonable time. The avoided cost study must comply with the criteria for avoided cost studies described above. A state commission may submit an avoided cost study to this Commission for a determination of whether it complies with these criteria. If a party (either a reseller or an incumbent LEC) believes that a state commission has failed to act within a reasonable period of time, that party may file a petition for declaratory ruling with this Commission, asking us to determine whether the state has failed to comply with this rule. We will, in making such determinations, consider the particular circumstances in the state involved. If a state commission has adopted as of the release date of this Order an interim wholesale pricing decision that relies on an avoided cost study that meets the criteria set forth above, the state commission may continue to require an incumbent LEC to offer services for resale under such interim wholesale prices in lieu of the default discount range, so long as the state commission's interim pricing rules are fully enforceable by resellers and followed by a final decision within a reasonable period of time that adopts an avoided cost study that meets the criteria set forth above.

933. We select the 17 to 25 percent range of default discounts based on our evaluation of the record. The adjusted results of the MCI model taken together with the results of those state proceedings discussed above that indicated they applied the statutory standard produces, a range between 18.74 and 25.98 percent. A majority of these wholesale discount rates fall between 18.74 and 21.11 percent. Other state commissions, such as California and New York, that have

[2207] Prior to apportioning avoided costs between business and residential services, the Georgia Commission's avoided cost computation would have yielded an aggregate wholesale discount rate of 18.74 percent. This figure is computed by dividing the total avoided costs computed by the Georgia Commission by the total BellSouth residential and business revenues (which were used individually both to apportion total avoided costs between residential and business service and as the denominator in the final wholesale discount calculations).

[2208] *See, e.g., Order Instituting Rulemaking on the Commission's Own Motion into Competition for Local Exchange Service*, R. 95-04-043 and I. 95-04-044 (California Commission April 26, 1996); *U S West Communications, Inc. Filing Advice Letter No. 2610 in Compliance with Commission Decision No. C96-521 Adopting Emergency Rules*, Docket No. 96S-233T (Colorado Commission June 21, 1996); *Wholesale Rates for Telecommunications Services Ruling on AT&T's Petition for a Reduction on the Wholesale Rates of Bell Atlantic-Maryland, Inc.*, Case No. 8721 (Maryland Commission June 27, 1996).

employed avoided cost studies have produced wholesale discount rates somewhat below the low end of this range. Furthermore, it has been argued that smaller incumbent LECs' avoided costs are likely to be less than those of the larger incumbent LECs, whose data was used by MCI. Therefore, to allow for these considerations, we select 17 percent as the lower end of the range.[2209] We select 25 percent as the top of the range because it approximates the top of the range of results produced by the modified MCI model. This range gives state commissions flexibility in addressing circumstances of incumbent LECs serving their states and permits resale to proceed until such time as the state commission can review a fully-compliant avoided cost study.

934. We have considered the economic impact of our rules in this section on small incumbent LECs. For example, Bay Springs, *et al.*, argues that national wholesale pricing rules will insufficiently consider operational differences between small and large incumbent LECs.[2210] We take this into consideration in setting the default discount rate and in requiring state commissions to perform carrier-specific avoided cost studies within a reasonable period of time that will reflect carrier-to-carrier differences. We believe, however, that the procompetitive goals of the 1996 Act require us to establish a default discount rate for state commissions to use in the absence of avoided cost studies that comply with the criteria we set forth above. The presumptions we establish in conducting avoided cost studies regarding the avoidability of certain expenses may be rebutted by evidence that certain costs are not avoided, which should minimize any economic impact of our decisions on small incumbent LECs. We also note that certain small incumbent LECs are not subject to our rules under section 251(f)(1) of the 1996 Act, unless otherwise determined by a state commission, and certain other small incumbent LECs may seek relief from their state commissions from our rules under section 251(f)(2) of the 1996 Act.

C. Conditions and Limitations

935. Section 251(c)(4) requires incumbent LECs to make their services available for resale without unreasonable or discriminatory conditions or limitations. This portion of this Order addresses various issues relating to conditions or limitations on resale. It first discusses restrictions, generally, in Section VIII.C.1. Next, it turns to promotional and discounted offerings and the conditions that may attach to such offerings in Section VIII.C.2., and then to refusals to resell residential and below-cost services in Section VIII.C.3. Limitations on the categories of customers to whom a reseller may sell incumbent LEC services are discussed in VIII.C.4. Resale restrictions in the form of withdrawal of service are discussed in VIII.C.5. Finally, Section VIII.C.6. discusses resale restrictions relating to provisioning.

1. Restrictions, Generally, and Burden of Proof

[2209] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

[2210] Bay Springs, *et al.*, comments at 17.

a. Background and Comments

936. In the NPRM, we asked whether incumbent LECs should have the burden of proving that restrictions on resale are reasonable and nondiscriminatory.[2211] We stated our belief that, given the pro-competitive goals of the 1996 Act and the view that restrictions and conditions were likely to be evidence of an exercise of market power, the range of permissible restrictions should be quite narrow.[2212]

937. A number of parties, including IXCs, resellers, and some state commissions, agree that incumbent LECs should have the burden of justifying any restrictions they impose on the resale of their services.[2213] For example, Jones Intercable proposes a requirement that incumbent LECs prove that a proposed condition or restriction will directly advance an important public policy objective and that the benefits of the condition plainly outweigh its anticompetitive effects.[2214] Many add the caveat that the only permissible restriction should be the cross-class restriction, section 251(c)(4)(B), prohibiting resellers that obtain at wholesale rates telecommunications services that are available at retail only to a category of subscribers from offering such services to a different category of subscribers.[2215] The Texas Public Utility Counsel suggests that the relevant determination is whether an incumbent LEC could impose the condition in question in a competitive market.[2216]

938. Incumbent LECs support various restrictions and limitations.[2217] BellSouth and the Ohio Consumers' Counsel further suggest that the burden of justifying restrictions and limitations

[2211] NPRM at para. 175.

[2212] *Id.*

[2213] *See, e.g.*, ACSI comments at 60; California Commission comments at 35-37; CFA/CU comments at 17; Citizens Utilities comments at 27; Colorado Commission comments at 52-53; Jones Intercable comments at 24; MFS comments at 70; NEXTLINK comments at 30; Pennsylvania Commission comments at 36; Ohio Commission comments at 62; TCC comments at 43; Telecommunications Resellers Ass'n comments at 20; Washington Commission comments at 32.

[2214] Jones Intercable comments at 32-33.

[2215] *See, e.g.*, CFA/CU comments at 17; Citizens Utilities at 27; Colorado Commission comments at 52-53; TCC comments at 43. Many of these parties offer a narrow interpretation of section 251(c)(4)(B), which will be discussed, *infra*.

[2216] Texas Public Utilities Counsel reply at 42.

[2217] *See, e.g.*, BellSouth comments at 66.

should not be placed on LECs.[2218]

b. Discussion

939. We conclude that resale restrictions are presumptively unreasonable. Incumbent LECs can rebut this presumption, but only if the restrictions are narrowly tailored. Such resale restrictions are not limited to those found in the resale agreement. They include conditions and limitations contained in the incumbent LEC's underlying tariff. As we explained in the NPRM, the ability of incumbent LECs to impose resale restrictions and conditions is likely to be evidence of market power and may reflect an attempt by incumbent LECs to preserve their market position. In a competitive market, an individual seller (an incumbent LEC) would not be able to impose significant restrictions and conditions on buyers because such buyers turn to other sellers. Recognizing that incumbent LECs possess market power, Congress prohibited unreasonable restrictions and conditions on resale. We, as well as state commissions, are unable to predict every potential restriction or limitation an incumbent LEC may seek to impose on a reseller. Given the probability that restrictions and conditions may have anticompetitive results, we conclude that it is consistent with the procompetitive goals of the 1996 Act to presume resale restrictions and conditions to be unreasonable and therefore in violation of section 251(c)(4). This presumption should reduce unnecessary burdens on resellers seeking to enter local exchange markets, which may include small entities, by reducing the time and expense of proving affirmatively that such restrictions are unreasonable.[2219] We discuss several specific restrictions below including certain restrictions for which we conclude the presumption of unreasonableness shall not apply. We also discuss certain restrictions that we will presume are reasonable.

2. Promotions and Discounts

a. Background and Comments

940. In the NPRM, we asked whether an incumbent LEC's obligation to make their services available for resale at wholesale rates applies to discounted and promotional offerings and, if so, how.[2220] We also asked, if the wholesale pricing obligation applies to promotions and discounts, whether the reseller entrant's customer must take service pursuant to the same restrictions that apply to the incumbent LEC's retail customers.[2221]

[2218] BellSouth comments at 65; Ohio Consumers' Counsel comments at 35.

[2219] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

[2220] NPRM at para. 175.

[2221] *Id.*

941. Incumbent LECs and Time Warner argue that they should not be required to offer discounted and promotional offerings at wholesale rates.[2222] These parties argue that promotions and discounts are merely subsets of standard offerings, or that promotions and discounts are only devices for marketing underlying "telecommunications services."[2223] Thus, these parties argue, a discounted and promotional offering is not in itself a "telecommunications service" that is subject to the resale requirement as long as the standard offering is made available for resale at wholesale rates.[2224]

942. Incumbent LECs argue that requiring promotions and discounts to be made available at wholesale rates will discourage such offerings. According to incumbent LECs, promotions and discounts serve as a means by which incumbent LECs differentiate their services from resellers' offerings.[2225] Furthermore, they contend that establishing a system where resellers' service and pricing options track incumbent LECs' promotions and discounts would promote collusion rather than competition.[2226] SBC notes that resellers will have access to volume discounts (through aggregating) that will allow them to compete with promotions and discounts offered by incumbent LECs.[2227] Incumbent LECs argue that many promotions, such as offering installation at no charge for new customers for limited periods, are short-term and used as marketing tools.[2228] Some parties suggest that the wholesale rate obligation should, at least, not attach to offerings that are only available for a limited period of time.[2229] Specifically, some parties recommend that we not permit incumbent LECs not to offer wholesale rates for offerings that are only available for 120 days or less.[2230]

[2222] *See, e.g.*, Ameritech comments at 57; Bell Atlantic comments at 46; MECA comments at 60; NYNEX comments at 76; SNET comments at 34; Time Warner comments at 73; U S West comments at 67; USTA comments at 72. Some parties commented only with respect to promotional offerings. *See, e.g.*, BellSouth comments at 66; Cincinnati Bell comments at 34; PacTel comments at 87; SBC comments at 72.

[2223] *See, e.g.*, Ameritech comments at 57; NYNEX comments at 76.

[2224] *See, e.g.*, Bell Atlantic reply at 23-24; GTE comments at 50; MECA comments at 60; NYNEX comments at 76; Time Warner comments at 73.

[2225] *See, e.g.*, BellSouth comments at Attachment (Interconnection and Economic Efficiency), p. 22; Cincinnati Bell comments at 33; USTA comments at Attachment (Affidavit of Jerry Hausman), p.14.

[2226] GTE comments at 50.

[2227] SBC comments at 72-73.

[2228] *See, e.g.*, NYNEX comments at 76 (promotions are merely short term waivers of nonrecurring charges).

[2229] Ameritech comments at 56-57; GTE reply at 27 n.49; Ohio Consumer's Counsel comments at 36; PacTel reply at 45.

[2230] *See, e.g.*, Ameritech comments at 57.

943. Some parties also contend that section 251(c)(4) resale obligations should not apply to contract,[2231] trial,[2232] or community service offerings.[2233] GTE and U S West argue that high volume rate offerings should not be subject to the wholesale rate obligation because they are already discounted.[2234] Ameritech and Bell Atlantic argue that contract offerings are not subject to resale because they are not made generally available.[2235]

944. IXCs, resellers, and DoJ argue that if incumbent LECs are not required to offer promotions and other discounts at wholesale rates, incumbent LECs will be able to undercut rates that resellers offer.[2236] They contend that services, classes of customers, or even individual customers could be strategically targeted by the incumbent LECs.[2237] The Telecommunications Resellers Association and others argue that price reductions that are designed to drive competitors from the market do not produce long-term gains for consumers.[2238] The Ohio Consumers' Counsel argues that, if the Commission were to exempt short-term promotional offerings, 120 days is too long to be considered short-term.[2239] IXCs and resellers contend that contract offerings should be made available for resale.[2240]

945. Incumbent LECs, some state commissions, and the Ohio Consumers' Counsel argue that if promotions and discounts are subject to wholesale pricing, reseller end-users must take

[2231] BellSouth comments at 66; USTA comments at 72.

[2232] Bell Atlantic reply at 23-24; SBC comments at 71; USTA comments at 72.

[2233] J. Staurulakis comments at 7. LDDS advocates that resale of community service offerings be limited to the class of subscribers eligible to receive such offerings. LDDS comments at 84.

[2234] GTE comments at 49-50; U S West comments at 68.

[2235] Ameritech reply at 47; Bell Atlantic reply at 24.

[2236] *See, e.g.*, AT&T comments at 83; Cable & Wireless comments at 37; Telecommunications Resellers Ass'n reply at 13; DoJ comments at 54-55. For this reason, the Washington Commission made its support of promotional and discount resale restrictions contingent on rules that would prevent incumbent LECs from pricing such offerings below rates offered to resellers. Washington Commission comments at 32.

[2237] *See, e.g.*, Telecommunications Resellers Ass'n reply at 13.

[2238] Telecommunications Resellers Ass'n reply at 13.

[2239] Ohio Consumers' Counsel reply at 30.

[2240] *See, e.g.*, LDDS reply at 43; Telecommunications Resellers Ass'n reply at 14.

such promotions and discounts under the same conditions as incumbent LEC end users.[2241] Resellers argue, however, that incumbent LECs will use this latitude to engage in anticompetitive practices by creating conditions that will have an unnecessarily greater impact on typical reseller end users than incumbent LEC end users.[2242]

946. Incumbent LECs also seek to limit reseller end user eligibility to purchase resold incumbent LEC high-volume offerings to those eligible to receive such offerings directly from the incumbent LEC.[2243] Such a limitation would prevent high-volume services from being resold to low-volume customers. MFS argues that such restrictions should be considered per se unreasonable because this is a significant source of the resellers' competitive advantage.[2244] The Ohio and Pennsylvania Commissions also support resellers' rights to aggregate low volume customers to take advantage of the resulting buying power.[2245]

947. U S West generally argues that resellers should make the same type of purchasing commitments made by current purchasers of wholesale services.[2246] Often, U S West argues, wholesalers are required to concentrate their purchases on services from a limited number of switches in order to receive volume discounts. U S West argues that incumbent LECs should be allowed to require the same types of commitments from resellers purchasing such services.[2247] U S West and GTE propose allowing incumbent LECs to impose term requirements on resold offerings.[2248] Cable & Wireless opposes both of these requirements and suggests that they be made presumptively unreasonable.[2249]

[2241] *See, e.g.*, SBC reply at 15 n.34, PacTel comments at 45 n.95; Alabama Commission comments at 26; Ohio Consumers' Counsel comments at 35-36.

[2242] *See, e.g.*, Cable & Wireless comments at 42; Telecommunications Resellers Ass'n comments at 19 n.50.

[2243] *See, e.g.*, GTE comments at 49-50; California Commission comments at 35-37; PacTel reply at 45 n.95.

[2244] MFS comments at 70.

[2245] Ohio Commission comments at 65; Pennsylvania Commission comments at 36. The Ohio Commission, however, specifically states that it is opposed to federal rules on this subject. Ohio Commission at 65.

[2246] U S West comments at 67.

[2247] *Id.*

[2248] U S West comments at 67; GTE comments at 47.

[2249] Cable & Wireless comments at 48-49.

b. Discussion

948. Section 251(c)(4) provides that incumbent LECs must offer for resale at wholesale rates "any telecommunications service" that the carrier provides at retail to noncarrier subscribers. This language makes no exception for promotional or discounted offerings, including contract and other customer-specific offerings. We therefore conclude that no basis exists for creating a general exemption from the wholesale requirement for all promotional or discount service offerings made by incumbent LECs. A contrary result would permit incumbent LECs to avoid the statutory resale obligation by shifting their customers to nonstandard offerings, thereby eviscerating the resale provisions of the 1996 Act. In discussing promotions here, we are only referring to price discounts from standard offerings that will remain available for resale at wholesale rates, *i.e.*, temporary price discounts.[2250]

949. There remains, however, the question of whether all short-term promotional prices are "retail rates" for purposes of calculating wholesale rates pursuant to section 252(d)(3). The 1996 Act does not define "retail rate;" nor is there any indication that Congress considered the issue. In view of this ambiguity, we conclude that "retail rate" should be interpreted in light of the pro-competitive policies underlying the 1996 Act. We recognize that promotions that are limited in length may serve procompetitive ends through enhancing marketing and sales-based competition and we do not wish to unnecessarily restrict such offerings. We believe that, if promotions are of limited duration, their procompetitive effects will outweigh any potential anticompetitive effects. We therefore conclude that short-term promotional prices do not constitute retail rates for the underlying services and are thus not subject to the wholesale rate obligation.

950. We must also determine when a promotional price ceases to be "short term" and must therefore be treated as a retail rate for an underlying service. Incumbent LEC commenters support 120 days as the maximum period for such promotions. This has been criticized as being too long. We are concerned that excluding promotions that are offered for as long as four months may unreasonably hamper the efforts of new competitors that seek to enter local markets through resale. We believe that promotions of up to 90 days, when subjected to the conditions outlined below, will have significantly lower anticompetitive potential, especially as compared to the potential procompetitive marketing uses of such promotions. We therefore establish a presumption that promotional prices offered for a period of 90 days or less need not be offered at a discount to resellers. Promotional offerings greater than 90 days in duration must be offered for resale at wholesale rates pursuant to section 251(c)(4)(A). To preclude the potential for abuse of promotional discounts, any benefit of the promotion must be realized within the time period of the promotion, *e.g.*, no benefit can be realized more than ninety days after the promotional offering is taken by the customer if the promotional offering was for ninety days. In addition, an incumbent LEC may not use promotional offerings to evade the wholesale obligation, for example

[2250] Limited time offerings of service are still subject to resale pursuant to *supra* Section VIII.A.

by consecutively offering a series of 90-day promotions.

951. We find unconvincing the arguments that the offerings under section 251(c)(4) should not apply to volume-based discounts. The 1996 Act on its face does not exclude such offerings from the wholesale obligation. If a service is sold to end users, it is a retail service, even if it is priced as a volume-based discount off the price of another retail service. The avoidable costs for a service with volume-based discounts, however, may be different than without volume contracts.

952. We are concerned that conditions that attach to promotions and discounts could be used to avoid the resale obligation to the detriment of competition. Allowing certain incumbent LEC end user restrictions to be made automatically binding on reseller end users could further exacerbate the potential anticompetitive effects. We recognize, however, that there may be reasonable restrictions on promotions and discounts. We conclude that the substance and specificity of rules concerning which discount and promotion restrictions may be applied to resellers in marketing their services to end users is a decision best left to state commissions, which are more familiar with the particular business practices of their incumbent LECs and local market conditions. These rules are to be developed, as necessary, for use in the arbitration process under section 252.

953. With respect to volume discount offerings, however, we conclude that it is presumptively unreasonable for incumbent LECs to require individual reseller end users to comply with incumbent LEC high-volume discount minimum usage requirements, so long as the reseller, in aggregate, under the relevant tariff, meets the minimal level of demand. The Commission traditionally has not permitted such restrictions on the resale of volume discount offers.[2251] We believe restrictions on resale of volume discounts will frequently produce anticompetitive results without sufficient justification. We, therefore, conclude that such restrictions should be considered presumptively unreasonable. We note, however, that in calculating the proper wholesale rate, incumbent LECs may prove that their avoided costs differ when selling in large volumes.

3. Below-Cost and Residential Service

a. Background and Comments

954. Responding to our general questions regarding the scope of limitations that may be

[2251] *See, e.g., Regulatory Policies Concerning Resale and Shared Use of Common Carrier Services and Facilities*, Docket No. 20097, Report and Order, 60 FCC 2d 261, 308-16 (1976) (divisions of full time private line circuits will enable smaller users to make efficient, discrete use of private line offerings, and such advantages will be in terms of cost savings and selectivity rather than technical advantages).

placed on competitors' resale of incumbent LEC services,[2252] parties addressed in their comments whether below-cost and residential services are subject to section 251(c)(4). Generally, those arguing against application of the wholesale discount also argue against requiring or even allowing resale of below-cost services. Incumbent LECs, including small incumbent LECs serving higher cost areas, and some state commissions argue that restrictions on resale of below-cost services are permissible.[2253] They argue that these services are often funded through internal subsidies that diminish with the onset of competition.[2254] GTE argues that there simply are no costs to avoid where below-cost services are offered at wholesale.[2255] GTE and PacTel argue that, if we were to apply wholesale pricing to services offered below cost, we should delay doing so until states have had the opportunity to rebalance rates.[2256]

955. Potential competitors, primarily IXCs, argue that incumbent LEC losses will not be increased as a result of resale of these services, even at a discount, so long as the services are only sold to the same class of customers to whom the incumbent LEC's offering is available.[2257] Jones Intercable further argues that not allowing resellers to "serve" customers currently subscribing to below-cost service violates the universal service provisions of the 1996 Act.[2258] The Telecommunications Resellers Association notes that establishing rules based on whether a service is offered below, at, or above cost will invite lengthy regulatory disputes.[2259] Additionally, TCC points out that incumbent LECs will continue to receive access revenue even from resold service and such revenue will continue to subsidize such services.[2260]

[2252] NPRM at para. 175.

[2253] *See, e.g.*, MECA comments at 60; SBC comments at 71-72; SNET comments at 31-32; U S West comments at 67; GTE comments at 46 (acknowledging, however, that its position on this might change depending on the outcome of universal service reform); Oregon Commission comments at 31. Additionally, incumbent LECs argue that steps should be taken to ensure that the underlying provider of the service continues to receive universal service payments. *See, e.g.*, NYNEX comments at 84.

[2254] SNET comments at 31-32. Bell Atlantic argues that this might even be considered an unconstitutional taking. Bell Atlantic reply at Attachment 2 (Epstein Declaration), p. 7.

[2255] GTE comments at 46.

[2256] PacTel reply at 44; GTE reply at 26-27.

[2257] *See, e.g.*, AT&T comments at 80; California Commission reply at 21-22; Competition Policy Institute comments at 24; GCI comments at 1, 14; LDDS comments at 84; MCI comments at 89; Sprint reply at 35-37; TCC comments at 44 n.44; Telecommunications Resellers Ass'n reply at 15.

[2258] Jones Intercable comments at 32-33.

[2259] Telecommunications Resellers Ass'n reply at 15.

[2260] TCC comments at 44 n.44.

b. Discussion

956. Subject to the cross-class restrictions discussed below, we believe that below-cost services are subject to the wholesale rate obligation under section 251(c)(4). First, the 1996 Act applies to "any telecommunications service" and thus, by its terms, does not exclude these types of services. Given the goal of the 1996 Act to encourage competition, we decline to limit the resale obligation with respect to certain services where the 1996 Act does not specifically do so. Second, simply because a service may be priced at below-cost levels does not justify denying customers of such a service the benefits of resale competition. We note that, unlike the pricing standard for unbundled elements, the resale pricing standard is not based on cost plus a reasonable profit. The resale pricing standard gives the end user the benefit of an implicit subsidy in the case of below-cost service, whether the end user is served by the incumbent or by a reseller, just as it continues to take the contribution if the service is priced above cost. So long as resale of the service is generally restricted to those customers eligible to receive such service from the incumbent LEC, as discussed below, demand is unlikely to be significantly increased by resale competition. Thus, differences in incumbent LEC revenue resulting from the resale of below-cost services should be accompanied by proportionate decreases in expenditures that are avoided because the service is being offered at wholesale.

957. We have considered the economic impact of our rules in this section on small incumbent LECs. For example, MECA argues that services incumbent LECs offer at below cost rates should not be subject to resale under section 251(c)(4). We do not adopt MECA's proposal. As explained above, we conclude that the 1996 Act provides that below-cost services are subject to the section 251(c)(4) resale obligation and that differences in incumbent LEC revenue resulting from the resale of below-cost services should be accompanied by decreases in expenditures that are avoided because the service is being offered at wholesale. Therefore, resale of below-cost services at wholesale rates should not adversely impact small incumbent LECs.[2261] We also note that certain small incumbent LECs are not subject to our rules under section 251(f)(1) of the 1996 Act, unless otherwise determined by a state commission, and certain other small incumbent LECs may seek relief from their state commissions from our rules under section 251(f)(2) of the 1996 Act.

4. Cross-Class Selling

a. Background

958. In the NPRM, we sought comment on the meaning of section 251(c)(4)(B) which provides that "[a] State commission may, consistent with regulations prescribed by the Commission under this section, prohibit a reseller that obtains at wholesale rates a telecommunications service that is available at retail only to a category of subscribers from

[2261] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et seq.*

offering such service to a different category of subscribers."[2262] We suggested that competing telecommunications carriers should not be allowed to purchase a subsidized service that is offered to a specific category of subscribers and then resell such service to other customers. We tentatively concluded, for example, that it might be reasonable for a state to restrict the resale of a residential exchange service that is limited to low-income consumers, such as the existing Lifeline program.[2263] We noted that we have generally not allowed carriers to prevent other carriers from purchasing high-volume, low-price offerings to resell to a broad pool of lower volume customers.[2264] Similarly, we inquired into the propriety of practices such as limiting the resale of flat-rated service.[2265]

b. Comments

959. There is a general consensus among incumbent LECs, IXCs, and others that resale of residential service should be limited to customers eligible to take such service from the incumbent LEC under section 251(c)(4)(B).[2266] There is a similar consensus that resale of Lifeline service should be limited to those eligible to receive such service from the incumbent LEC.[2267] Some argue that section 251(c)(4)(B) is only applicable to classes of subscribers whose service is explicitly subsidized or provided at below-cost rates and that broader cross-class restrictions should be considered unreasonable.[2268] Ohio Consumers' Counsel argues that residential services that may be offered above cost are still offered at a lower profit margin than business services for public policy reasons, justifying the inclusion of all residential services in

[2262] NPRM at para. 176.

[2263] *Id.*

[2264] *Id.*

[2265] This practice of limiting the resale of flat-rated services was listed as an example of state practices on which we sought comment in the NPRM at para. 177.

[2266] *See, e.g.*, ACTA comments at 25; Ameritech comments at 54; California Commission comments at 35-37; CFA/CU comments at 16; Comptel reply at 43 n.114; GTE comments at 49-50; GVNW comments at 39; Illinois Ind. Tel. Ass'n comments at 6; MCI comments at 89; NCTA comments at 57; PacTel comments at 87; Sprint comments at 70. Texas Public Utility Counsel argues that the residential cross class selling restrictions should merely prohibit the resale of flat-rated residential service to business customers. Texas Public Utility Counsel comments at 44-45.

[2267] *See, e.g.*, California Commission comments at 36-37; LDDS comments at 84; NYNEX comments at 80.

[2268] *See, e.g.*, AT&T reply at 38-39; DOJ comments at 54; Telecommunications Resellers Association comments at 17 n.46.

the scope of section 251(c)(4)(B).[2269]

960. NYNEX and the Massachusetts Commission argue that incumbent LECs may prohibit the resale of flat-rated services.[2270] They argue that resale of services to multiple-use customers would be unfair to incumbent LECs. National Private Telecommunications Association and Jones Intercable advocate that incumbent LECs should not be allowed to impose resale restrictions that would prevent the offering of shared tenant services operations. Shared tenant services operations involve using trunking to serve multiple unit dwellings with fewer lines than would be needed if each unit separately subscribed to service directly from the incumbent LEC.[2271]

961. Finally, some parties express concern that incumbent LECs will create multitudes of classes in order to prevent resellers, as a practical matter, from competing to provide such services and recommend that any new classes be presumed unreasonable.[2272]

c. Discussion

962. There is general agreement that residential services should not be resold to nonresidential end users, and we conclude that restrictions prohibiting such cross-class reselling of residential services are reasonable. We conclude that section 251(c)(4)(B) permits states to prohibit resellers from selling residential services to customers ineligible to subscribe to such services from the incumbent LEC. For example, this would prevent resellers from reselling wholesale-priced residential service to business customers. We also conclude that section 251(c)(4)(B) allows states to make similar prohibitions on the resale of Lifeline or any other means-tested service offering to end users not eligible to subscribe to such service offerings. State commissions have established rate structures that take into account certain desired balances between residential and business rates and the goal of maximizing access by low-income consumers to telecommunications services. We do not wish to disturb these efforts by prohibiting or overly narrowing state commissions' ability to impose such restrictions on resale.

963. Shared tenant services are made possible through the resale and trunking of flat-rated services to multiple customers. We do not believe that these or other efficient uses of technology should be discouraged through restrictions on the resale of flat-rated offerings to multiple end users, even if incumbent LECs have not always priced such offerings assuming these

[2269] Ohio Consumers' Counsel comments at 36.

[2270] NYNEX comments at 80; Mass. Commission comments at 5; MECA comments at 61.

[2271] National Private Telecommunications Ass'n reply at 4-5; Jones Intercable reply at 27.

[2272] CompTel comments at 102.

usage patterns. We therefore conclude that such restrictions are presumptively unreasonable.

964. We also conclude that all other cross-class selling restrictions should be presumed unreasonable. Without clear statutory direction concerning potentially allowable cross-class restrictions, we are not inclined to allow the imposition of restrictions that could fetter the emergence of competition. As with volume discount and flat-rated offerings, we will allow incumbent LECs to rebut this presumption by proving to the state commission that the class restriction is reasonable and nondiscriminatory.

5. Incumbent LEC Withdrawal of Services

a. Background

965. In the NPRM, we sought comment on whether an incumbent LEC can avoid making a service available at wholesale rates by ceasing to offer the retail service on a retail basis, or whether the incumbent should first be required to make a showing that withdrawing the offering is in the public interest or that competitors will continue to have an alternative way of providing service. We also asked if access to unbundled elements addresses the concern that incumbent LECs could withdraw retail services.[2273]

b. Comments

966. A number of large incumbent LECs and USTA argue that incumbent LECs should be allowed to withdraw services unilaterally and unconditionally.[2274] These parties argue that they have the right to make their own business decisions and the right to terminate the offering of a service that they feel is unprofitable.[2275] Some potential competitors also supported the ability of incumbent LECs to withdraw service, but explicitly conditioned such support on bilateral "grandfathering" of existing customers, *i.e.*, allowing current end users of the terminated service to continue to purchase the service at least for a limited time.[2276] These services then would not be required to be offered for resale because they are no longer offered to the public.[2277] Thus, these parties argue that there would be a permissible restriction on the resale of "grandfathered" services permitting resale only to "grandfathered" customers. Some incumbent LECs suggest that potential concerns over incumbent LEC withdrawal of service would be eliminated if both

[2273] NPRM at para. 175.

[2274] *See, e.g.*, Ameritech comments at 54-55; GTE comments at 48; SBC comments at 73.

[2275] *See, e.g.*, Ameritech reply at 48; GTE comments at 48-49; MECA comments at 60-61.

[2276] *See, e.g.*, Cable & Wireless comments at 42-43.

[2277] *See, e.g.*, SBC comments at 73; J. Staurulakis comments at 5-6.

resellers and incumbent LECs could compete for grandfathered customers.[2278]

967. Several commenters, primarily IXCs, resellers, and state commissions, expressed concern about the incumbent LECs' ability to circumvent resale obligations by withdrawing services that resellers are able to use to compete effectively.[2279] IXCs, resellers, some state commissions, and others argue that unilateral withdrawals of service should be considered presumptively unreasonable.[2280] Several commenters discuss U S West's attempted withdrawal of Centrex service, a small business service that resellers frequently wish to purchase to compete with incumbent LECs, as an example of such behavior.[2281] Others ask us to require that there be a substitutable alternative to a withdrawn service before it could be withdrawn.[2282] The Telecommunications Resellers Association and Cable & Wireless argue that even the existence of a competitive alternative is not sufficient to prevent anticompetitive behavior because such a standard represents an open invitation to strategic manipulation of service offerings and pricing.[2283] Both the Ohio Commission and the Competition Policy Institute argue that access to unbundled elements does not alleviate concerns about incumbent LEC withdrawal of service offerings.[2284]

c. Discussion

968. We are concerned that the incumbent LECs' ability to withdraw services may have anticompetitive effects where resellers are purchasing such services for resale in competition with the incumbent. We decline to issue general rules on this subject because we conclude that this is a matter best left to state commissions. Many state commissions have rules regarding the

[2278] Ameritech reply at 49; NYNEX reply at 37.

[2279] *See, e.g.*, ACTA comments at 9; AT&T reply 37-38; CompTel comments at 101; DOJ comments at 55; Florida Commission comments at 36; MCI comments at 85; Sprint reply at 35-37; Telecommunications Resellers Ass'n comments 18-19.

[2280] *See, e.g.*, AT&T reply at 37-38; Cable & Wireless comments at 43; Ohio Commission comments at 63-64; Pennsylvania Commission comments at 36; Washington Commission comments at 32-33; ASCI comments at 59-60; Competition Policy Institute comments at 25.

[2281] *See, e.g.*, ACTA comments at 9; MCI comments at 87-88; TCC comments at 44.

[2282] Competition Policy Institute comments at 25; GST comments at 32; MFS comments at 71-72; Ohio Commission comments at 65. MCI and Frontier propose that a showing that there is no demand for a service would also be sufficient. MCI comments at 88; Frontier comments at 28. DoJ argues that unilateral withdrawal should only be allowed if the service is shown to be obsolete. DoJ comments at 55-56.

[2283] Telecommunications Resellers Ass'n comments at 19 n.49; Cable & Wireless comments at 43.

[2284] Ohio Commission comments at 64; Competition Policy Institute comments at 26.

withdrawal of retail services and have experience regulating such matters. States can assess, for example, the universal service implications of an incumbent LEC's proposal to withdraw a retail service. Therefore, we conclude that our general presumption that incumbent LEC restrictions on resale are unreasonable does not apply to incumbent LEC withdrawal of service. States must ensure that procedural mechanisms exist for processing complaints regarding incumbent LEC withdrawals of services. We find it important, however, to ensure that grandfathered customers -- subscribers to the service being withdrawn who are allowed by an incumbent LEC to continue purchasing services -- not be denied the benefits of competition. We conclude that, when an incumbent LEC grandfathers its own customers of a withdrawn service, such grandfathering should also extend to reseller end users. For the duration of any grandfathering period, all grandfathered customers should have the right to purchase such grandfathered services either directly from the incumbent LEC or indirectly through a reseller.[2285] The incumbent LEC shall offer wholesale rates for such grandfathered services to resellers for the purpose of serving grandfathered customers.

6. Provisioning

a. Comments

969. Resellers and IXCs express concern that incumbent LECs are not making, and will not make, services available for resale in a timely manner or fail to provide a minimal level of operational support and service quality.[2286] Such resellers and IXCs also argue that incumbent LEC claims of capacity shortages should not excuse failures to provide timely service or to treat resellers on an equal basis with other incumbent LEC customers.[2287] Cable & Wireless argues that customer changeover charges should not be allowed to exceed the same Primary Interexchange Carrier ("PIC") charge that is imposed when customers switch from one IXC to another.[2288] TCC proposes a set of rules regarding nondiscriminatory treatment of resellers and reporting requirements to implement such rules.[2289] These rules include provision of unbranded or rebranded operator and directory assistance services, a proposal also supported by AT&T, TCC, and ACSI.[2290] Incumbent LECs argue that refusing to build out their networks to handle reseller

[2285] *See Petition for a Total Local Exchange Wholesale Service Tariff from Illinois Bell Telephone Company*, Nos. 95-0458 and 95-0531 (consol.) (Illinois Commission June 26, 1996) at 38.

[2286] *See, e.g.*, Telecommunications Resellers Ass'n comments at 20-23; MCI comments at 88-89.

[2287] *See, e.g.*, Telecommunications Resellers Ass'n reply at 16 n.34; LDDS reply at 43.

[2288] Cable & Wireless comments at 49-50.

[2289] *See* TCC reply at 29-33.

[2290] *See* AT&T comments at 81 n.123; TCC reply at 31; ACSI comments at 47-48.

requests when they lack capacity is a reasonable course of action to prevent stranded investment should the reseller eventually build facilities of its own.[2291]

b. Discussion

970. We conclude that service made available for resale be at least equal in quality to that provided by the incumbent LEC to itself or to any subsidiary, affiliate, or any other party to which the carrier directly provides the service, such as end users. Practices to the contrary violate the 1996 Act's prohibition of discriminatory restrictions, limitations, or prohibitions on resale. This requirement includes differences imperceptible to end users because such differences may still provide incumbent LECs with advantages in the marketplace. Additionally, we conclude that incumbent LEC services are to be provisioned for resale with the same timeliness as they are provisioned to that incumbent LEC's subsidiaries, affiliates, or other parties to whom the carrier directly provides the service, such as end users. This equivalent timeliness requirement also applies to incumbent LEC claims of capacity limitations and incumbent LEC requirements relating to such limitations, such as potential down payments. We note that common carrier obligations, established by federal and state law and our rules, continue to apply to incumbent LECs in their relations with resellers. With regard to customer changeover charges, we conclude that states should determine reasonable and nondiscriminatory rates for such charges.

971. Brand identification is likely to play a major role in markets where resellers compete with incumbent LECs for the provision of local and toll service. This brand identification is critical to reseller attempts to compete with incumbent LECs and will minimize consumer confusion. Incumbent LECs are advantaged when reseller end users are advised that the service is being provided by the reseller's primary competitor. We therefore conclude that where operator, call completion, or directory assistance service is part of the service or service package an incumbent LEC offers for resale, failure by an incumbent LEC to comply with reseller branding requests presumptively constitutes an unreasonable restriction on resale. This presumption may be rebutted by an incumbent LEC proving to the state commission that it lacks the capability to comply with unbranding or rebranding requests. We recognize that an incumbent LEC may incur costs in complying with a request for unbranding or rebranding. Because we do not have a record on which to determine the level of fees or wholesale pricing offsets that may reasonably be assessed to recover these costs, we leave such determinations to the state commissions.

D. Resale Obligations of LECs Under Section 251(b)(1)

972. Section 251(b)(1) imposes a duty on all LECs to offer certain services for resale.

[2291] *See, e.g.*, U S West comments, Exhibit A (Federal Implementation of the Telecommunications Act of 1996) at 25-26. Incumbent LECs argue that they should be able to require minimum volume and term discounts if they must build out facilities. *See* Ameritech at 54; MECA comments at 60.

Specifically, section 251(b)(1) requires LECs "not to prohibit, and not to impose unreasonable or discriminatory conditions or limitations on, the resale of its telecommunications services."[2292]

1. Background

973. In the NPRM, we sought comment generally on the relationship of section 251(b)(1) to section 251(c)(4).[2293] We sought comment on whether all LECs are prohibited from imposing unreasonable restrictions on resale of their services, but only incumbent LECs that provide retail services to subscribers that are not telecommunications carriers are required to make such services available at wholesale rates to requesting telecommunications carriers.[2294] We also sought comment on what types of resale restrictions should be permitted under section 251(b)(1) and stated our belief that few, if any, conditions or limitations should be permitted for the same reasons that resale restrictions are sharply limited under section 251(c)(4).[2295] We also asked what standards should be adopted for determining whether resale restrictions should be permitted, and whether presumptions should be established.[2296]

2. Comments

974. A variety of commenters, including Cable & Wireless, Teleport, and several state commissions, support the view that wholesale pricing does not apply to nonincumbent LECs.[2297] A similar group of parties argue that the prohibition on unreasonable or discriminatory resale restrictions applies to nonincumbent LECs.[2298] The Ohio Consumers' Counsel contends that although nothing in section 251 requires states to create wholesale pricing for section 251(b)(1) resale, nothing in the 1996 Act prevents imposition of such pricing.[2299]

975. The Telecommunications Resellers Association argues that all resale restrictions by

[2292] 47 U.S.C. § 251(c)(4).

[2293] NPRM at para. 173.

[2294] *Id.* at para. 174.

[2295] *Id.*

[2296] *Id.* at para. 197.

[2297] *See, e.g.*, Cable & Wireless comments at 38 n.68; Teleport comments at 55; Pennsylvania Commission comments at 35.

[2298] Ohio Commission comments at 60-61; Pennsylvania Commission comments at 35; Teleport comments at 55; Cincinnati Bell comments at 31.

[2299] Ohio Consumers' Counsel comments at 35.

all LECs should be presumed unreasonable.[2300] MFS and Citizens Utilities contend that resale restrictions in sections 251(b)(1) and 251(c)(4)(B) should be interpreted in the same way.[2301] MFS and GST both argue that any restriction of a type that has been found reasonable for incumbent LECs should be presumed reasonable for all other LECs.[2302] NCTA asserts that new competitors have a great incentive to minimize costs, which will often involve using resellers for distribution purposes.[2303] They argue that to ensure that the resale obligations of entrants do not adversely impact their ability to engage in facilities-based competition with incumbent LECs, the Commission should defer the duty of facilities-based competitors to engage in resale.[2304]

3. Discussion

976. There are two differences between the resale obligations in section 251(b)(1) and in section 251(c)(4): the scope of services that must be resold and the pricing of such resale offerings. Section 251(b)(1) requires resale of all telecommunications services offered by the carrier while section 251(c)(4) only applies to telecommunications services that the carrier provides at retail to subscribers who are not telecommunications carriers. Thus, the scope of services to which section 251(b)(1) applies is larger and necessarily includes all services subject to resale under section 251(c)(4). We need not prescribe a minimum list of services that are subject to the 251(b)(1) resale requirement for the same reasons that we specified for not prescribing such a list in Section VIII.A. of this Order. We note that section 251(b)(1) clearly omits a wholesale pricing requirement. We therefore conclude that the 1996 Act does not impose wholesale pricing requirements on nonincumbent LECs. Nonincumbent LECs definitionally lack the market power possessed by incumbent LECs[2305] and were therefore not made subject to the wholesale pricing obligation in the 1996 Act. Their wholesale rates will face competition by incumbent LECs, making a wholesale pricing requirement for nonincumbent LECs unnecessary.

977. Sections 251(b)(1) and 251(c)(4) contain the same statutory standards regarding resale restrictions. Therefore, we conclude that our rules concerning resale restrictions under section 251(b)(1), such as the general presumption that all resale restrictions are unreasonable, should be the same as under section 251(c)(4). We conclude that any restriction of a type that has been found reasonable for incumbent LECs should be deemed reasonable for all other LECs

[2300] Telecommunications Resellers Ass'n comments at 53.

[2301] MFS comments at 69; Citizens Utilities comments at 27.

[2302] MFS comments at 75-76; GST comments at 33.

[2303] NCTA comments at 20-21.

[2304] *Id.* at 21.

[2305] *See* 47 U.S.C. § 251(h)(2).

as well.

E. Application of Access Charges

1. Background

978. In the NPRM, we suggested that an entrant that merely resold a bundled retail service purchased at wholesale rates would not receive access revenues.[2306] In other words, IXCs must still pay access charges to incumbent LECs for originating and terminating interstate traffic of an end user served by a telecommunications carrier that resells incumbent LEC services under section 251(c)(4).

2. Comments

979. Parties that commented on this issue generally agree with our analysis in the NPRM. Some commenters argue that incumbent LECs, including small incumbent LECs, should continue to receive access charge revenues when resellers purchase wholesale services under section 251(c)(4).[2307] The Rural Telephone Coalition argues that retail local service rates, upon which wholesale rates will be based, have been developed with the assumption that incumbent LECs will receive access charge revenues.[2308] The Wisconsin Commission points out that Wisconsin law currently prevents resale of access services performed by at least small LECs.[2309] On the other hand, the Texas Office of Public Utility Counsel asserts that switched access services are offered to end users and should be subject to resale.[2310] While they did not explicitly address the issue, some potential competitors alluded to their assumptions that such access charges would continue to be retained by the incumbent LEC.[2311]

3. Discussion

980. We conclude that the 1996 Act requires that incumbent LECs continue to receive access charge revenues when local services are resold under section 251(c)(4). IXCs must still

[2306] NPRM at para. 186.

[2307] Rural Tel. Coalition comments at 20; Citizens Utilities comments at 25; J. Staurulakis comments at 6.

[2308] Rural Tel. Coalition comments at 20. USTA makes a similar point, and emphasizes that incumbent LECs should continue to recover the SLC under these circumstances. USTA reply at 31.

[2309] Wisconsin Commission comments at Attachment, pp. 7-8.

[2310] Texas Public Utility Counsel reply at 17-18.

[2311] *See, e.g.*, TCC comments at 44 n.44; LDDS comments at 81; LDDS reply at 42, 46.

pay access charges to incumbent LECs for originating or terminating interstate traffic, even when their end user is served by a telecommunications carrier that resells incumbent LEC retail services. Resale, as defined in section 251(b)(1) and 251(c)(4), involves services, in contrast to section 251(c)(3), which governs sale of network elements. New entrants that purchase retail local exchange services from an incumbent LEC at wholesale rates are entitled to resell only those retail services, and not any other services -- such as exchange access -- the LEC may offer using the same facilities. IXCs must therefore still purchase access services from incumbent LECs outside of the resale framework of 251(c)(4), through existing interstate access tariffs.[2312]

981. Most existing interstate access charges are recovered from IXCs, and therefore can easily be recovered by incumbent LECs whether or not the incumbent LEC retains its billing relationship with the end user subscriber. To allow incumbent LECs to continue recovering the subscriber line charge (SLC), however, the mechanism for assessment of the SLC must be modified. The SLC is currently assessed directly on end users as a monthly charge.[2313] When an end user customer receives local exchange service from a reseller, however, the incumbent LEC will have no direct commercial relationship with that end user. Because the end user would not be a customer of the incumbent LEC, the incumbent LEC could not bill SLC directly to the end user as specified under our existing rules.

982. In March 1995, in the *Rochester Waiver Order*, we granted Rochester Telephone waivers to permit Rochester Telephone to recover the SLC from carriers that purchase local exchange service for resale, rather than recovering the SLC directly from end users.[2314] In that order, we stated that by offering the local exchange service for resale and by unbundling subscriber lines from other network functions, Rochester Telephone created a situation where it would no longer have a direct relationship with end users, IXCs, or both, and that such a situation was not contemplated when the Commission created the rules governing the recovery of access charges. We also permitted Rochester Telephone to bill to resellers the PIC change charge, which is assessed by incumbent local exchange carriers on end users that wish to change their primary interexchange carrier (PIC).

983. The resale requirements of the 1996 Act create a situation for the entire industry that is analogous to the situation Rochester Telephone faced in 1995. We therefore conclude that similar relief is warranted here with respect to the SLC, so that incumbent LECs can recover the SLC from resellers, as we conclude the 1996 Act mandates. Although the PIC change charge is

[2312] As discussed above, a different result occurs in the context of unbundled network elements. Purchasers of unbundled network elements in effect stand in the shoes of the LEC, and are entitled to revenues from all of the services provided using those elements.

[2313] 47 C.F.R. § 69.104.

[2314] *Rochester Telephone Corporation, Petition for Waivers to Implement its Open Market Plan, Order*, 10 FCC Rcd 6776 (1995) *(Rochester Waiver Order)*.

not a part of access charges, and is assessed only when an end user changes his or her primary interexchange carrier, this charge has similar characteristics to the SLC and therefore should also be subject to the rule we adopt. Incumbent LECs may assess the SLC and the PIC change charge on telecommunications carriers that resell incumbent LEC services under section 251(c)(4).

984. Although incumbent LECs may continue to recover the SLC when other carriers resell their local exchange services, the SLC is not subject to the wholesale pricing standard of section 252(d)(3). As described above, resellers of local exchange service are not reselling access services; they are purchasing these services from incumbent LECs in the same manner they do today. The SLC is a component of interstate access charges, not of intrastate local service rates. Consistent with the principles of cost-causation and economic efficiency, we have required the portion of interstate allocated loop costs represented by the SLC to be recovered from end users, rather than from carriers as with other access charges. Although the SLC is listed on end user monthly local service bills, this charge does not represent a "telecommunications service [an incumbent LEC] provides at retail to subscribers." Rather, the SLC, like other interstate access charges, relates solely to incumbent LEC interstate access services, which are provided to other carriers rather than retail subscribers and which we have concluded are not subject to the resale requirements of section 251(c)(4). Therefore, the reseller shall pay the SLC to the incumbent LEC for each subscriber taking resold service. The specific SLC that applies depends upon the identity of the end user served by the reselling telecommunications carrier.

IX. DUTIES IMPOSED ON "TELECOMMUNICATIONS CARRIERS" BY SECTION 251(a)

A. Background

985. Section 251(a) imposes two fundamental duties on all telecommunications carriers: (1) "to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers;" and (2) "not to install network features, functions, or capabilities that do not comply with the guidelines and standards established pursuant to sections 255 or 256."[2315] In this proceeding we determine which carriers are "telecommunications carriers" as defined in section 3(44) of the Act.[2316] In the NPRM, we tentatively concluded that, pursuant to the statute's definition of "telecommunications carrier" and "telecommunications service," to the extent a carrier is engaged in providing for a fee local, interexchange, or international services, directly to the public or to such classes of users as to be effectively available directly to the public, that carrier falls within the definition of "telecommunications carrier." We sought comment on which carriers are included under this definition, and on whether a provider may qualify as a telecommunications carrier for some purposes but not others.[2317]

986. We also tentatively concluded that we should determine whether the provision of mobile satellite services is Commercial Mobile Radio Services (CMRS) or Private Mobile Radio Service (PMRS) based on the factors set forth in the *CMRS Second Report and Order*.[2318] We

[2315] 47 U.S.C. § 251(a). Section 255 addresses access by persons with disabilities and ensures that manufacturers and providers of telecommunications will design equipment and provide service that is accessible to, and usable by, individuals with disabilities. Section 256 provides for coordination for interconnectivity "to promote nondiscriminatory accessibility by the broadest number of users and vendors of communications products and services." 47 U.S.C. §§ 255, 256.

[2316] The term telecommunications carrier means "any provider of telecommunications services, except that such term does not include aggregators of telecommunications services (as defined in section 226). A telecommunications carrier shall be treated as a common carrier under this Act only to the extent that it is engaged in providing telecommunications services, except that the Commission shall determine whether the provision of fixed and mobile satellite service shall be treated as common carriage." 47 U.S.C. § 153(44).

[2317] NPRM at para. 246.

[2318] NPRM at para. 247. The Commission makes this determination by looking at an array of public interest considerations (*e.g.*, the types of services being offered and the number of licensees being authorized). *See, e.g., Amendment of Parts 2, 22 and 25 of the Commission's Rules to Allocate Spectrum for, and To Establish Other Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services*, GN Docket No. 84-1234, Second Report and Order, 2 FCC Rcd 485, 490 (1987); *Amendment to the Commission's Rules to Allocate Spectrum for, and to Establish Other Rules and Policies Pertaining to a Radiodetermination Satellite Service*, GN Docket No. 84-689, Second Report and Order, 104 FCC 2d 650, 665-66 (1986).

sought comment on the meaning of offering service "directly or indirectly" to the public in the context of section 251(a)(1) and on whether section 251(a) allows non-incumbent LECs discretion to interconnect directly or indirectly with a requesting carrier.[2319] We also sought comment on what other actions we should take to ensure that carriers do not install network features, functions, or capabilities that are inconsistent with guidelines and standards established pursuant to sections 255 and 256.

B. Comments

987. Parties generally agree with our tentative conclusion that, to the extent a carrier is engaged in providing for a fee local, interexchange, or international services, directly to the public or to such classes of users as to be effectively available to the public, that carrier falls within the definition of "telecommunications carrier."[2320] BellSouth claims that the term "telecommunications carrier" should be synonymous with "common carrier."[2321] The Texas Commission argues that the obligations of section 251(a) should apply to all telecommunications carriers -- incumbent LECs and non-incumbent LECs alike.[2322] Metricom argues, however, that because non-dominant carriers lack incentives to deny interconnection to other carriers, the Commission should forbear from imposing any interconnection requirements upon such carriers.[2323] UTC argues that a party must be offering commercial telecommunications services to be a telecommunications carrier.[2324] UTC contends that utilities and other private system operators engage in a cost-sharing for construction and operation of private telecommunications networks. UTC claims that this should not constitute a "fee" in the sense of being a payment for receiving a telecommunications service. UTC further argues that the mere provision of infrastructure, such as "dark fiber" or wholesale capacity, to third-party carriers does not constitute a direct offering to the public, and thus does not qualify carriers offering such infrastructure as telecommunications carriers under the Act. Several CMRS carriers contend that

[2319] NPRM at para 248.

[2320] *See, e.g.*, Louisiana Commission comments at 21; Illinois Commission comments at 81-82; Pennsylvania Commission comments at 41; BellSouth comments at 75.

[2321] BellSouth comments at 75; COMAV comments at 60; *accord* United Cerebral Palsy Ass'n at 3 and American Foundation for the Blind at 3 (favoring a broad definition of telecommunications carrier that includes any provider of access to any network available to the public).

[2322] Texas Commission comments at 34; NWRA comments at 12-13 (arguing that both facilities based carriers and resellers meet the definition of telecommunications carriers).

[2323] Metricom comments at 3.

[2324] UTC comments at 5-7.

CMRS providers are telecommunications carriers within the meaning of the Act.[2325]

988. The Illinois Commission argues that, if a company provides both telecommunications and information services, it must be classified as a telecommunications carrier for purposes of section 251.[2326] BellSouth claims, however, that a carrier may be a common carrier for some purposes, but not for others. For example, BellSouth argues that, when a common carrier also provides an information service, it is a common carrier for the provision of the telecommunications service, but a non-common carrier for the provision of the information service.[2327] ATSI contends that enhanced service providers are telecommunications carriers and entitled to the benefits of section 251.[2328]

989. The Illinois Commission argues that the Commission should continue to define mobile satellite service (MSS) as either CMRS or PMRS according to the Commission's factors set forth in the *Second CMRS Report and Order*.[2329] It argues, however, that if an MSS provider offers substitute services for those of a landline LEC, the MSS provider should also be defined as a LEC and treated accordingly under state and federal law.

990. With regard to the phrase "directly or indirectly" in section 251(a), Arch and Sprint argue that the goal is to ensure that all subscribers of one carrier are able to reach all subscribers of other carriers. They claim that this is achieved when two competitors interconnect to an incumbent LEC's network.[2330] Comcast asserts that requiring competitors to interconnect "directly or indirectly" reflects the Act's goal of applying less stringent obligations to carriers lacking market power by enabling competitors to interconnect with other carriers in a cost efficient

[2325] *See, e.g.*, Nextel comments at 6-7; NWRA comments at 12-13; Metricom comments at 1-7; COMAV comments at 60.

[2326] Illinois Commission comments at 81.

[2327] BellSouth comments at 75. UTC claims that only those portions of a Utility's network that is being used in the offering of telecommunications services is subject to the Act's interconnection obligations. Portions that are used on a private basis only are not. Bundling information services with telecommunications services should only create common carrier obligations to the extent that would apply if the telecommunications services were offered by themselves. UTC comments at 9-10.

[2328] ATSI reply at 6 (enhanced service providers (ESPs) must have access to network elements at terms and conditions that allow ESPs to offer competitive services in the marketplace).

[2329] Illinois Commission comments at 81.

[2330] Arch comments at 18; Sprint comments at 89. The parties add that carriers should be permitted, on a voluntary basis, to establish direct interconnection. *Id.*

manner.[2331] The Texas Commission argues that the obligations under section 251(a) should apply to all telecommunications carriers, incumbent and non-incumbents, alike. The Texas Commission claims that, if "non-[incumbent] LECs are allowed the discretion to determine whether to offer direct or indirect connection to another carrier, then the goal of encouraging the most efficient interconnection and thereby bringing the benefits of a competitive market to all consumers will not be realized."[2332]

991. The Commission received few comments on the meaning of section 251(a)(2). Commenters representing individuals with disabilities state that the term "network features, functions, and capabilities" should be defined as broadly as possible to ensure that individuals with disabilities have access to the network.[2333] The American Foundation for the Blind also suggests that any service deployed by a telecommunications carrier, or by a provider connecting to a telecommunications network, and intended for public use should be considered an installation of "features, functions, or capabilities."[2334] The United Cerebral Palsy Associations state that there are currently proceedings underway by both the Commission and by the United States Architectural & Transportation Barriers Compliance Board (Access Board) as part of the section 255 mandate. The United Cerebral Palsy Associations urge the Commission to state that the Commission has the power to enforce both the standards developed in its proceedings and those of the Access Board.[2335]

C. Discussion

992. A "telecommunications carrier" is defined as "any provider of telecommunications services, except that such term does not include aggregators of telecommunications services (as defined in section 226)."[2336] A telecommunications carrier shall be treated as a common carrier under the Act "only to the extent that it is engaged in providing telecommunications services, except that the Commission shall determine whether the provision of fixed and mobile satellite service shall be treated as common carriage."[2337] A "telecommunications service" is defined as

[2331] Comcast comments at 16-17.

[2332] Texas Commission comments at 34.

[2333] *See, e.g.*, American Foundation for the Blind comments at 2; United Cerebral Palsy Ass'n comments at 2.

[2334] American Foundation for the Blind comments at 2.

[2335] United Cerebral Palsy Ass'n comments at 2.

[2336] 47 U.S.C. § 153(44). The term "aggregator" is defined as "any person that, in the ordinary course of its operations, makes telephones available to the public or to transient users of its premises, for interstate telephone calls using a provider of operator services." 47 U.S.C. § 226(a)(2).

[2337] 47 U.S.C. § 153 (44).

the "offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used."[2338] We conclude that to the extent a carrier is engaged in providing for a fee domestic or international telecommunications, directly to the public or to such classes of users as to be effectively available directly to the public, the carrier falls within the definition of "telecommunications carrier."[2339] We find that this definition is consistent with the 1996 Act,[2340] and there is nothing in the record in this proceeding that suggests that this definition should not be adopted. Also, enhanced service providers, to the extent that they are providing telecommunications services, are entitled to the rights under section 251(a).

993. We believe, as a general policy matter, that all telecommunications carriers that compete with each other should be treated alike regardless of the technology used unless there is a compelling reason to do otherwise. We agree with those parties that argue that all CMRS providers are telecommunications carriers and are thus obligated to comply with section 251(a).[2341] These carriers meet the definition of "telecommunications carrier" because they are providers of telecommunications services as defined in the 1996 Act and are thus entitled to the benefits of section 251(c), which include the right to request interconnection and obtain access to unbundled elements at any technically feasible point in an incumbent LEC's network. PMRS is defined as any mobile service that is not a commercial service or the functional equivalent of a commercial mobile service.[2342] We conclude that to the extent a PMRS provider uses capacity to provide domestic or international telecommunications for a fee directly to the public, it will fall within the definition of "telecommunications carrier" under the Act and will be subject to the duties listed in section 251(a).[2343]

[2338] 47 U.S.C. § 153(44). "Telecommunications" is defined in the Act as "the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received." 47 U.S.C. § 153(43).

[2339] NPRM at para. 246.

[2340] 47 U.S.C. § 153(44), 153(46).

[2341] The term "CMRS" is defined as "any mobile service . . . that is provided for profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public." 47 U.S.C. § 332(d)(1). CMRS includes, among others, some private paging, personal communications services, business radio services, and mobile service that is the functional equivalent of a commercial mobile radio service. 47 C.F.R. § 20.9.

[2342] 47 U.S.C. § 332(d)(3).

[2343] The Commission held in the *CMRS Second Report and Order* that any PMRS provider that "employs spectrum for not-for-profit services, such as an internal operation, but also uses its excess capacity to make available a service that is intended to receive compensation, will be deemed to be a 'for profit' service to the extent of such excess capacity activities." *Implementation of Section 3(n) and 332 of the Communications Act*, Second Report and

994. We conclude that cost-sharing for the construction and operation of private telecommunications networks is not within the definition of "telecommunications services" and thus such operators of private networks are not subject to the requirements of section 251(a). We believe that such methods of cost-sharing do not equate to a "fee directly to the public" under the definition of "telecommunications service."[2344] Conversely, to the extent an operator of a private telecommunications network is offering "telecommunications"[2345] for a fee directly to the public, or to such classes of users as to be effectively available directly to the public (*i.e.*, providing a telecommunications service),[2346] the operator is a telecommunications carrier and is subject to the duties in section 251(a). Providing to the public telecommunications (*e.g.*, selling excess capacity on private fiber or wireless networks), constitutes a telecommunications service and thus subjects the operator of such a network to the duties of section 251(a) to that extent.

995. We conclude that, if a company provides both telecommunications and information services, it must be classified as a telecommunications carrier for purposes of section 251, and is subject to the obligations under section 251(a), to the extent that it is acting as a telecommunications carrier. We also conclude that telecommunications carriers that have interconnected or gained access under sections 251(a)(1), 251(c)(2), or 251(c)(3), may offer information services through the same arrangement, so long as they are offering telecommunications services through the same arrangement as well. Under a contrary conclusion, a competitor would be precluded from offering information services in competition with the incumbent LEC under the same arrangement, thus increasing the transaction cost for the competitor. We find this to be contrary to the pro-competitive spirit of the 1996 Act. By rejecting this outcome we provide competitors the opportunity to compete effectively with the incumbent by offering a full range of services to end users without having to provide some services inefficiently through distinct facilities or agreements. In addition, we conclude that enhanced service providers that do not also provide domestic or international telecommunications, and are thus not telecommunications carriers within the meaning of the Act, may not interconnect under section 251.

996. Consistent with our tentative conclusion in the NPRM, we will determine whether the provision of mobile satellite service (MSS) is CMRS (and therefore common carriage) or

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Order, GN Docket No. 93-252, 9 FCC Rcd 1411, 1429 (1994) *(CMRS Second Report and Order)*.

[2344] 47 U.S.C. § 153(46).

[2345] The term "telecommunications" means "the transmission, between or among points specified by the user, of information of the user's choosing, without change in form or content of the information as sent and received." 47 U.S.C. § 153(43).

[2346] 47 U.S.C. § 153(46).

PMRS based on the factors set forth in the *CMRS Second Report and Order*.[2347] Commenters have not raised objections to the Commission's tentative conclusion on this issue.

997. Regarding the issue of interconnecting "directly or indirectly" with the facilities of other telecommunications carriers, we conclude that telecommunications carriers should be permitted to provide interconnection pursuant to section 251(a) either directly or indirectly, based upon their most efficient technical and economic choices. The interconnection obligations under section 251(a) differ from the obligations under section 251(c). Unlike section 251(c), which applies to incumbent LECs, section 251(a) interconnection applies to all telecommunications carriers including those with no market power. Given the lack of market power by telecommunication carriers required to provide interconnection via section 251(a), and the clear language of the statute, we find that indirect connection (*e.g.*, two non-incumbent LECs interconnecting with an incumbent LEC's network) satisfies a telecommunications carrier's duty to interconnect pursuant to section 251(a). We decline to adopt, at this time, Metricom's suggestion to forbear under section 10 of the 1996 Act[2348] from imposing any interconnection requirements upon non-dominant carriers. We believe that, even for telecommunications carriers with no market power, the duty to interconnect directly or indirectly is central to the 1996 Act and achieves important policy objectives. Nothing in the record convinces us that we should forbear from imposing the provisions of section 251(a) on non-dominant carriers. In fact, section 251 distinguishes between dominant and non-dominant carriers, and imposes a number of additional obligations exclusively on incumbent LECs.[2349] Similarly, we also do not agree with the Texas Commission's argument that the obligations of section 251(a) should apply equally to all telecommunications carriers. Section 251 is clear in imposing different obligations on carriers depending upon their classification (*i.e.*, incumbent LEC, LEC, or telecommunications carrier).[2350] For example, section 251(c) specifically imposes obligations upon incumbent LECs to interconnect, upon request, at all technically feasible points. This direct interconnection, however, is not required under section 251(a) of all telecommunications carriers.

998. Section 251(a)(2) prohibits telecommunications carriers from installing network features, functions, and capabilities that do not comply with standards or guidelines established under sections 255 and 256. Because the Commission and the Architectural and Transportation Barriers Compliance Board have not developed standards or guidelines under section 255, we find that it would be premature at this point to attempt to delineate specific requirements or definitions

[2347] *CMRS Second Report and Order*, 9 FCC Rcd at 1457-58 (1994).

[2348] 47 U.S.C. § 160.

[2349] *See* 47 U.S.C. § 251. The 1996 Act makes further provisions for rural carriers and, upon an appropriate showing, carriers serving fewer than 2 percent of the nation's access lines. *See* 47 U.S.C. § 251(f)(1), (f)(2).

[2350] 47 U.S.C. § 251.

of terms to implement Section 251(a)(2).[2351] Similarly, the Commission has asked its federal advisory committee, the Network Reliability and Interoperability Council, for recommendations on how the Commission should implement Section 256. We intend to issue a further notice of proposed rulemaking seeking comment on what accessibility and compatibility requirements apply to telecommunications carriers who install network features, functions and capabilities.

[2351] The Illinois Commission lists several features which could provide access to individuals with disabilities, such as access to interrupt messages, directory assistance and operator services by users of text telephones (TTYs). Illinois Commission comments at 82-83. Specific accessibility requirements such as those proposed by the Illinois Commission will need to be developed in proceedings to implement section 255, and therefore, we will not set forth any required "features, functions, or capabilities" in this proceeding.

X. COMMERCIAL MOBILE RADIO SERVICE INTERCONNECTION

999. In the NPRM, we sought comment on whether interconnection arrangements between incumbent LECs and CMRS providers fall within the scope of sections 251 and 252. Application of sections 251 and 252 to LEC-CMRS interconnection arrangements involves two distinct issues. One is whether the terms and conditions of the physical interconnection between incumbent LECs and CMRS providers are governed under section 251(c)(2), and the corresponding pricing standards set forth in section 252(d)(1). The second, and perhaps more critical issue from the CMRS providers' perspective, is whether CMRS providers are entitled to reciprocal compensation for transport and termination under section 251(b)(5), and the corresponding pricing standards set forth in section 252(d)(2).[2352]

1000. We tentatively concluded in the NPRM that CMRS providers are not obliged to provide to requesting telecommunications carriers either reciprocal compensation for transport and termination of telecommunications under section 251(b)(5), or interconnection under the provisions of section 251(c)(2), but that CMRS providers may be entitled to request interconnection under section 251(c)(2) for the purposes of providing "telephone exchange service and exchange access."[2353] We sought comment on this tentative conclusion. We also asked for comment on the separate but related question of whether LEC-CMRS transport and termination arrangements fall within the scope of section 251(b)(5). In addition, we sought comment on the relationship between section 251 and section 332(c).[2354] We acknowledged that issues relating to LEC-CMRS interconnection pursuant to section 332(c) were part of an ongoing proceeding initiated before the passage of the 1996 Act[2355] and retained the prerogative of incorporating by reference the comments filed in that docket to the extent necessary. We hereby do so.

[2352] 47 U.S.C. §§ 251, 252.

[2353] 47 U.S.C. §§ 251(b)(5), 251(c)(2).

[2354] 47 U.S.C. §332(c). This section sets forth the regulatory treatment for mobile services, including the common carrier treatment of CMRS providers (except for such provisions of Title II as the Commission may specify), the right of CMRS providers to request (and the Commission to order) physical interconnection with other common carriers and the preemption of state regulation of the entry of or the rates charged by any CMRS providers.

[2355] *Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, Notice of Proposed Rulemaking, CC Docket No. 95-185, 11 FCC Rcd 5020 (1996) (*LEC-CMRS Interconnection NPRM*).

A. CMRS Providers and Obligations of Local Exchange Carriers Under Section 251(b) and Incumbent Local Exchange Carriers Under Section 251(c).

1. Background

1001. Section 251(b) imposes duties only on LECs, and section 251(c) imposes duties only on incumbent LECs. Section 3(26) of the Act defines "local exchange carrier" to mean "any person that is engaged in the provision of telephone exchange service or exchange access," but "does not include a person insofar as such person is engaged in the provision of a commercial mobile service under section 332(c), except to the extent that the Commission finds that such service should be included in the definition of such term."[2356] In the NPRM, we sought comment on whether, and to what extent, CMRS providers should be classified as "local exchange carriers" and therefore subject to the duties and obligations imposed by section 251(b).

2. Comments

1002. Most of the comments on this issue urge that CMRS providers should not be classified as LECs.[2357] Some commenters assert that CMRS was expressly excluded from the definition of a LEC in section 3(a)(2)(44) of the 1996 Act and that the legislative history confirms that Congress intended that the Commission reconsider whether CMRS providers should be classified as LECs only if "future circumstances warrant."[2358] PCIA maintains that there is no basis for classifying CMRS providers as LECs, because CMRS is not yet a substitute for wireline local exchange service for a substantial number of subscribers, and because CMRS licensees lack the control over essential facilities that underlies the adoption of Section 251.[2359] Pronet contends that paging operators do not provide local exchange services, and that Congress did not contemplate treating CMRS providers as LECs.[2360] Some CMRS providers propose that the Commission apply the criteria in section 332(c)(3) in considering whether a CMRS provider should be classified as a LEC -- that the service is a replacement for a substantial portion of the

[2356] 47 U.S.C. § 153(26).

[2357] 360 Communications comments at 9; Airtouch comments at 9; Bell Atlantic/NYNEX Mobile comments at 5; F. Williamson comments at 8-9; Cox comments at 50-51; PCIA comments at 16.

[2358] *See, e.g.*, Airtouch reply at 4-6 (*citing* H.R. Rep. No. 104-458, 104th Cong., 2d Sess. 115 (1996)); PCIA reply at 6; Bell Atlantic/NYNEX Mobile comments at 4-5; PCIA comments at 16; GTE reply at 40 (Commission already found that CMRS providers should not be regulated as LECs for the purpose of interconnection and the 1996 Act does nothing to alter this conclusion).

[2359] PCIA comments at 17; *accord* Nextel comments at 6.

[2360] Pronet comments at 8.

wireline telephone exchange service within a state.[2361] Nextel argues that a CMRS provider should not be classified as a LEC until it has become a substitute for a land-line telephone exchange service for a substantial portion of the communications within a state.[2362] Omnipoint states that application of the section 332(c)(3) test will permit CMRS providers, which are also small businesses, to be relieved of LEC-type regulatory burdens during their initial entry years, so that they can act as "spirited, if smaller" competitors to the incumbent LEC.[2363] The Ohio Commission contends that the Commission should consider market share, diversity of network, and name recognition in classifying CMRS providers as LECs.[2364]

1003. COMAV and National Wireless Resellers Association, on the other hand, contend that CMRS entities can provide exchange and exchange access services "and thus are *de facto*" LECs.[2365] COMAV also argues that, if a CMRS provider is a subsidiary of an incumbent LEC, it should be treated as an incumbent LEC, and thus be required to unbundle and allow direct interconnection.[2366] NARUC argues that the type of service provided, rather than the technology employed, should determine the appropriate regulatory treatment, and that a CMRS provider should therefore be treated as a LEC if it provides fixed local service.[2367] The Illinois Commission similarly indicates that a CMRS provider should be regulated as a LEC when it establishes a wireless local loop for the express purpose of competing against or bypassing the landline loop.[2368]

3. Discussion

1004. We are not persuaded by those arguing that CMRS providers should be treated as LECs, and decline at this time to treat CMRS providers as LECs. Section 3(26) of the Act, quoted above, makes clear that CMRS providers should not be classified as LECs until the Commission makes a finding that such treatment is warranted. We disagree with COMAV and National Wireless Resellers Association that CMRS providers are *de facto* LECs (and even

[2361] Cox comments at 51 n.96; Omnipoint comments at 2; Vanguard comments at 21; BellSouth comments at 70; 360 Communications comments at 9; Bell Atlantic/NYNEX Mobile comments at 5.

[2362] Nextel reply at 2.

[2363] Omnipoint comments at 3-4.

[2364] Ohio Commission comments at 68.

[2365] COMAV comments at 2; National Wireless Resellers Assn comments at 7-10.

[2366] COMAV comments at 2, 40-43.

[2367] NARUC comments at 21.

[2368] Illinois Commission comments at 63-64.

incumbent LECs if they are affiliated with a LEC) simply because they provide telephone exchange and exchange access services. Congress recognized that some CMRS providers offer telephone exchange and exchange access services, and concluded that their provision of such services, by itself, did not require CMRS providers to be classified as LECs. We further note that, because the determination as to whether CMRS providers should be defined as LECs is within the Commission's sole discretion, states are preempted from requiring CMRS providers to classify themselves as "local exchange carriers" or be subject to rate and entry regulation as a precondition to participation in interconnection negotiations and arbitrations under sections 251 and 252.

1005. NARUC argues that CMRS providers should be classified as LECs if they provide fixed service.[2369] We are currently seeking comment in our *CMRS Flexibility Proceeding*[2370] on the regulatory treatment to be afforded CMRS providers when they provide fixed services. Thus, we believe that it would be premature to answer that question here, based only on the record in this proceeding. We also decline to adopt the Illinois Commission's suggestion that we find that a CMRS provider is a LEC if the CMRS provider seeks to compete directly with a wireline LEC. Even if we were to accept the Illinois Commission's underlying assumption, the record in this proceeding contains no evidence that wireless local loops have begun to replace wireline loops for the provision of local exchange service. Thus, until such time that we decide otherwise, CMRS providers will not be classified as LECs, and are not subject to the obligations of section 251(b). We further note that, even if we were to classify some CMRS providers as LECs, other types of CMRS providers, such as paging providers, might not be so classified because they do not offer local exchange service or exchange access.

1006. We further note that, because CMRS providers do not fall within the definition of a LEC under section 251(h)(1), they are not subject to the duties and obligations imposed on incumbent LECs under section 251(c).[2371] An incumbent LEC is defined in section 251(h)(1), and includes only those LECs that were, on the date of enactment of the 1996 Act, deemed to be members of NECA pursuant to 47 C.F.R. § 69.601(b), or the successor or assign of a NECA member. Similarly, we do not find that CMRS providers satisfy the criteria set forth in section 251(h)(2), which grants the Commission the discretion to, by rule, provide for the treatment of a LEC as an incumbent LEC if certain conditions are met.[2372]

[2369] NARUC comments at 21.

[2370] *Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services*, WT Docket No. 96-6, First Report and Order and Further Notice of Proposed Rulemaking, FCC 96-283 (released August 1, 1996).

[2371] 47 U.S.C. § 251(h)(1). *See infra*, Section XI.C.

[2372] 47 U.S.C. § 251(h)(2). *See infra*, Section XI.C.

B. Reciprocal Compensation Arrangements Under Section 251(b)(5)

1007. Some parties contend that LEC-CMRS transport and termination arrangements do not fall within the scope of 251(b)(5), which requires LECs to establish reciprocal compensation arrangements for transport and termination.[2373] Other commenters argue that because CMRS providers fall within the definition of "telecommunications carriers," they fall within the scope of section 251(b)(5).[2374]

1008. Under section 251(b)(5), LECs have a duty to establish reciprocal compensation arrangements for the transport and termination of "telecommunications."[2375] Under section 3(43), "[t]he term 'telecommunications' means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received."[2376] All CMRS providers offer telecommunications. Accordingly, LECs are obligated, pursuant to section 251(b)(5) (and the corresponding pricing standards of section 252(d)(2)), to enter into reciprocal compensation arrangements with all CMRS providers, including paging providers, for the transport and termination of traffic on each other's networks, pursuant to the rules governing reciprocal compensation set forth in Section XI.B., below.

C. Interconnection Under Section 251(c)(2)

1. Background

1009. Section 251(c)(2)(A) provides that an incumbent LEC must provide interconnection with its local exchange network to "any requesting telecommunications carrier . . . for the transmission and routing of telephone exchange service and exchange access."[2377] In the NPRM, we tentatively concluded that CMRS providers may be entitled to request interconnection under section 251(c)(2) for the purposes of providing telephone exchange service and exchange access.[2378] We sought comment on this tentative conclusion.

2. Comments

[2373] PCIA comments at 13; PageNet comments at 10; APC comments at 1.

[2374] BellSouth comments at 63; National Wireless Resellers Assn comments at 7; Mobilemedia comments at 13.

[2375] 47 U.S.C. § 251(b)(5).

[2376] 47 U.S.C. § 153(43).

[2377] 47 U.S.C. § 251(c)(2)(A).

[2378] 47 U.S.C. § 251(c)(2).

1010. Several commenters argue that many CMRS providers provide telephone exchange service and exchange access as defined by the 1996 Act, and thus section 251(c)(2) should govern their interconnection arrangements with incumbent LECs.[2379] NYNEX contends that all CMRS providers, other than providers of one-way paging, provide telephone exchange service.[2380] The Ohio Commission contends that all voice grade CMRS providers which provide local exchange service may request interconnection under section 251(c)(2).[2381] The Pennsylvania Commission argues that all voice-grade and non-voice grade CMRS providers fit within the definition of telecommunications carriers and fall within the parameters of section 251(c)(2).[2382]

1011. Many wireless carriers argue that interconnection arrangements between incumbent LECs and CMRS providers do not fall within the scope of section 251(c)(2).[2383] CTIA claims that CMRS was intended to be regulated differently than other services because it entails different traffic flows and different termination costs.[2384] Airtouch claims that, if LEC-CMRS interconnection were found to fall within the scope of section 251, the concept of "local exchange areas" could create implementation problems and adverse policy results, thus supporting application of section 332(c)(1)(B).[2385]

3. Discussion

1012. As discussed in the preceding section, CMRS providers meet the statutory definition of "telecommunications carriers."[2386] We also agree with several commenters that many CMRS providers (specifically cellular, broadband PCS and covered SMR) also provide telephone

[2379] *See, e.g.*, Pennsylvania Commission comments at 34; PacTel comments at 83; Bell Atlantic/NYNEX Mobile comments at 7; Nextel comments at 6-7; API comments at 3; Florida Commission comments at 35-36.

[2380] NYNEX comments at 23.

[2381] Ohio Commission comments at 59.

[2382] Pennsylvania Commission comments at 34.

[2383] *See, e.g.*, AT&T comments at 43; Sprint comments at 70; Bell Atlantic/NYNEX Mobile comments at 2; CTIA comments at 2-3; Nextel comments at 5-6; Omnipoint comments at 3-5; Vanguard comments at 20-22; MECA comments at 59; Arch comments at 12-13; Airtouch reply at 3; Sprint/APC comments at 2-3 (Congress crafted a definition of "local exchange carrier" that excluded CMRS indicating that it did not want CMRS providers treated with all providers of telecommunications services). Sprint/APC claim in their joint comments that it is clear from the 1996 Act as a whole, and from section 332(c), that CMRS providers are entitled to reasonable interconnection from LECs without regard to section 251. Sprint/APC comments at 5.

[2384] CTIA comments at 7; Sprint/APC comments at 3.

[2385] Airtouch reply at 7.

[2386] *See supra*, Section IX.

exchange service and exchange access as defined by the 1996 Act. Incumbent LECs must accordingly make interconnection available to these CMRS providers in conformity with the terms of sections 251(c) and 252, including offering rates, terms, and conditions that are just, reasonable and nondiscriminatory.[2387]

1013. The 1996 Act defines "telephone exchange service" as "service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area . . . and which is covered by the exchange service charge, *or (B) comparable service* provided through a system of switches, transmission equipment, or other facilities (or combination thereof) by which a subscriber can originate and terminate a telecommunications service."[2388] At a minimum, we find that cellular, broadband PCS, and covered SMR providers fall within the second part of the definition because they provide "comparable service" to telephone exchange service. The services offered by cellular, broadband PCS, and covered SMR providers are comparable because, as a general matter, and as some commenters note, these CMRS carriers provide local, two-way switched voice service as a principal part of their business.[2389] Indeed, the Commission has described cellular service as exchange telephone service[2390] and cellular carriers as "generally engaged in the provision of local exchange telecommunications in conjunction with local telephone companies . . . ."[2391] In addition, although CMRS providers are not currently classified as LECs, the fact that most CMRS providers are capable, both technically and pursuant to the terms of their licenses, of providing fixed services, as LECs do, buttresses our conclusion that these CMRS providers offer services that are "comparable" to telephone exchange service and supports the notion that these services may become a true economic substitute for wireline local

[2387] 47 U.S.C. § 251(c)(2)(D).

[2388] 47 U.S.C. § 153(47) (emphasis added). This is a broader definition of "telephone exchange service" than had previously existed; Congress changed the definition in the 1996 Act to include services "comparable" to telephone exchange.

[2389] *See, e.g.*, NYNEX comments at 23.

[2390] *See Need to Promote Competition and Efficient Use of Spectrum for Radio Common Carriers*, Memorandum Opinion and Order, 59 Rad. Reg.2d 1275, 1278 (1986).

[2391] *In the Matter of the Need to Promote Competition and Efficient Use of Spectrum For Radio Common Carrier Services*, Memorandum Opinion and Order, 59 Rad. Reg. 2d 1275, 1278 (1986) (*Competition Opinion*); *see also id.* at 1284 (cellular carriers are primarily engaged in the provision of local, intrastate exchange telephone service); *Equal Access and Interconnection Obligations Pertaining to Commercial Radio Services*, CC Docket No. 94-54, Notice of Proposed Rulemaking and Notice of Inquiry, 9 FCC Rcd 5408, 5453 and nn.192, 195 (and cases cited therein) (1994).

exchange service in the future.[2392]

1014. We also believe that other definitions in the Act support the conclusion that cellular, broadband PCS, and covered SMR licensees provide telephone exchange service. The fact that the 1996 Act's definition of a LEC excludes CMRS until the Commission finds that such service should be included in the definition,"[2393] suggests that Congress found that some CMRS providers were providing telephone exchange service or exchange access, but sought to afford the Commission the discretion to decide whether CMRS providers should be treated as LECs under the new Act. Similarly, section 253(f) permits the states to impose certain obligations on "telecommunications carrier[s] that seek[ ] to provide telephone exchange service" in rural areas.[2394] The provision further provides that "[t]his subsection shall not apply . . . to a provider of commercial mobile services."[2395] It would have been unnecessary for the statute to include this exception if some CMRS were not telephone exchange service. Similarly, section 271(c)(1)(A), which sets forth conditions for determining the presence of a facilities-based competitor for purposes of BOC applications to provide in-region, interLATA services, provides that Part 22 [cellular] services "shall not be considered to be telephone exchange services," for purposes of that section.[2396] Again, if Congress did not believe that cellular providers were engaged in the provision of telephone exchange service, it would not have been necessary to exclude cellular providers from this provision.

1015. The arguments that CMRS traffic flows may differ from wireline traffic, that CMRS providers' termination costs may differ from LECs, that CMRS service areas do not coincide with wireline local exchange areas, or that CMRS providers are not LECs, do not alter our conclusion that cellular, broadband PCS, and covered SMR licensees provide telephone exchange service. These considerations are not relevant to the statutory definition of telephone exchange service in section 3(47). Incumbent LECs are required to provide interconnection to CMRS providers who request it for the transmission and routing of telephone exchange service or exchange access, under the plain language of section 251(c)(2).[2397]

[2392] *See Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services*, WT Docket No. 96-6, First Report and Order and Further Notice of Proposed Rulemaking, FCC 96-283 (released August 1, 1996)(amending rules to allow providers of narrowband and broadband PCS, cellular, CMRS SMR, CMRS paging, CMRS 220 MHz service, and for-profit interconnected business radio services to offer fixed wireless services on their assigned spectrum on a co-primary basis with mobile services).

[2393] 47 U.S.C. § 153(26).

[2394] 47 U.S.C. § 253(f).

[2395] *Id.*

[2396] 47 U.S.C. § 271(c)(1)(A).

[2397] 47 U.S.C. § 251(c)(2).

D. Jurisdictional Authority for Regulation of LEC-CMRS Interconnection Rates

1. Background

1016. In the NPRM, we sought comment on the relationship between section 251 and section 332(c).[2398] As noted above, we hereby incorporate by reference the comments filed in CC Docket No. 95-185 to the extent relevant to our analysis. In the NPRM, we noted that we had previously sought comment on the relationship of these two statutory provisions in the LEC-CMRS Interconnection proceeding.[2399] In the LEC-CMRS proceeding, we tentatively concluded that the Commission has sufficient authority to promulgate specific federal requirements for interstate and intrastate LEC-CMRS interconnection arrangements, including the adoption of a specific interim bill and keep arrangement.[2400] However, we reached that tentative conclusion before the enactment of the 1996 Act.

2. Comments

1017. Several wireless firms argue that LEC-CMRS interconnection rates are governed by section 332 rather than (or in addition to) sections 251 and 252.[2401] One argument advanced by some parties is that section 251(i), which provides that "[n]othing in this section shall be construed to limit or otherwise affect the Commission's authority under section 201,"[2402] preserves the Commission's authority over interstate interconnection under section 201.[2403] Thus, they argue, section 251(i) enables the Commission to not apply sections 251 and 252 whenever interstate services are at issue.[2404] Cox states that, because "Section 251 does not prevent the Commission from establishing an interconnection policy for LEC-to-CMRS traffic under its general Section 201 powers, Section 252 has no particular relevance for any interconnection

[2398] 47 U.S.C. § 332.

[2399] NPRM at para. 169.

[2400] *Id.* at 5072-73.

[2401] *See, e.g.*, AT&T comments at 42; Airtouch comments at 5; Cox comments at 50; CTIA reply at 2; PCIA comments at 3-9.

[2402] 47 U.S.C. § 251(i).

[2403] *See, e.g.*, Cox comments in CC Docket No. 95-185 at 43-44; CTIA comments in CC Docket No. 95-185 at 62; Omnipoint comments at 12; Vanguard Cellular comments at 15.

[2404] Cox comments in CC Docket No. 95-185 at 43-44.

policy established by this proceeding."[2405]

1018. Another theory proposed by several wireless carriers is that section 332 makes all CMRS interconnection issues interstate, including interconnection rates, and thus all CMRS interconnection matters are subject to federal jurisdiction under section 201, and are not governed by sections 251 and 252.[2406] These parties assert that, prior to the 1993 Budget Act, the Commission did not exercise any authority over the intrastate rates of LEC interconnection provided to radio common carriers, but that the 1993 Budget Act changed the Commission's jurisdiction over LEC-CMRS interconnection rates.[2407] Parties rely on two provisions amended or added by the 1993 Budget Act to reach this conclusion. First, they point to section 332(c)(3), entitled "State Preemption," which provides in pertinent part that "*[n]otwithstanding section[ ] 2(b) . . .*, no State or local government shall have any authority to regulate the entry of or *the rates charged by any commercial mobile service* or any private mobile service, except that this paragraph shall not prohibit a State from regulating the other terms and conditions of commercial mobile services."[2408] Second, commenters point to a limiting clause added to section 2(b), which provides that: "*[e]xcept as provided in section 223 through 227, inclusive, and section 332 . . .*, nothing in this Act shall be construed to apply or to give the Commission jurisdiction [over intrastate telecommunications]."[2409] Cox interprets these cross-references to mean that, "[u]nder this revised framework, the States retain jurisdiction to regulate the 'terms and conditions' of CMRS service delivered to end users and can petition the Commission to regulate CMRS rates when CMRS becomes a substitute for landline telephone service," but that "[i]n the meantime, CMRS is a wholly interstate service and any interconnection to a CMRS provider, regardless of the source, is an interconnection governed by the FCC's interstate jurisdiction under Section 201 of the Communications Act."[2410]

1019. Some parties further argue that section 332(c)(1)(B) gives the Commission exclusive jurisdiction over LEC-to-CMRS interconnection rates.[2411] Cox argues that section

[2405] *Id.* at 44.

[2406] *Id.* at 39 n.77. *See also, e.g.*, Comcast comments in CC Docket No. 95-185 at 27; PageNet comments in CC Docket No. 95-185 at 37-38.

[2407] *Id.*

[2408] 47 U.S.C. § 332(c)(3)(A) (emphasis added).

[2409] 47 U.S.C. § 152(b) (emphasis added).

[2410] Cox comments in CC Docket No. 95-185 at 38-39.

[2411] *See, e.g.*, CTIA comments in Docket 95-185 at 62; Cox comments in CC Docket No. 95-185 at 44 n.78; Comcast comments in CC Docket No. 95-185 at 32.

332(c)(1)(B) expands the Commission's jurisdiction over CMRS by authorizing the Commission to order any common carrier, regardless of whether it is an intrastate or interstate carrier, to establish physical connections with any CMRS provider. Section 332(c)(1)(B) thus shows, according to Cox, "Congress' intent that the Commission be given full jurisdiction to regulate *all* aspects of CMRS, including interconnection to and from CMRS providers."[2412] Airtouch states that the Commission's section 201 jurisdiction is unaffected by Section 332(c)(1)(B) "except to the extent that the Commission is required to respond to [any CMRS provider's interconnection] request," and thus, section 332(c)(1)(B) does expand the Commission's section 201 authority, but only to the extent that LEC-CMRS interconnection - interstate and/or intrastate - is involved.[2413] CTIA contends that section 332(c)(3) must be read in a way that does not result in a one-sided regulatory scheme for LEC-to-CMRS interconnection and CMRS-to-LEC interconnection.[2414] Thus, according to CTIA, since section 332(c)(3) clearly preempts state regulation of interconnection rates charged *by* CMRS providers, it also preempts state regulation of interconnection rates charged *to* CMRS providers by LECs.[2415]

1020. Some parties contend that, because CMRS providers need interconnection to enter the market, all state regulation of interconnection affecting CMRS (including the intrastate rates charged by LECs) is entry regulation and therefore preempted under section 332(c)(3).[2416] Other commenters argue that section 253(e), which provides that "[n]othing in this section shall affect the application of section 332(c)(3) to commercial mobile service providers," demonstrates the Commission's exclusive jurisdiction over CMRS interconnection rates.[2417] CTIA argues that, "to apply Sections 251 and 252 to the LEC-CMRS relationship in place of Section 332, the Commission would effectively strip Section 332 of any meaning."[2418] Several parties also cite to the legislative history of both the 1993 Budget Act and the 1996 Act as support for their claims

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[2412] Cox comments in CC Docket No. 95-185 at 39 n.78 (emphasis in original).

[2413] Airtouch comments at 6; *Ex Parte* letter from Kathleen Q. Abernathy, Airtouch, to William F. Caton, Acting Secretary, FCC, July 18, 1996, at 1-2.

[2414] CTIA comments in CC Docket No. 95-185 at 73.

[2415] *Id.*

[2416] Omnipoint comments in CC Docket No. 95-185 at 13 (disparate state regulation of interconnection would serve as a prohibited state barrier to entry under section 332(c)(3)); Celpage comments in CC Docket No. 95-185 at 11-12 (inconsistent state regulation of LEC-CMRS interconnection rates would create barriers to entry).

[2417] *See, e.g.*, PageNet comments at 29; *Ex Parte* letter in CC Docket No. 95-185 from Werner K. Hartenberger and Laura H. Phillips, Counsel for Cox Enterprises, Inc., to William F. Caton, Acting Secretary, FCC, February 28, 1996, at 8 (Cox Feb. 28 *Ex Parte*); *see also* Nextel reply at 5.

[2418] CTIA comments at 59-60.

that section 332 governs LEC-CMRS interconnection arrangements.[2419] Some commenters note that the 1996 Act did not explicitly repeal section 332, and state that implicit repeals are disfavored under principles of statutory construction.[2420] In addition, Cox argues that the exception in section 271(c) for cellular providers suggests that Congress considers cellular service to be in an entirely different competitive market from landline local exchange service, thus preserving the Commission's exclusive jurisdiction over LEC-CMRS interconnection granted by the 1993 Budget Act.[2421]

1021. Incumbent LECs and other parties, on the other hand, argue that section 251 controls interconnection between CMRS providers and incumbent LECs.[2422] Several of these parties contend that section 332 only governs the rates CMRS providers charge their end users, not the rates that LECs or CMRS providers charge other telecommunications carriers for interconnection.[2423] NYNEX claims that, while section 332(c)(1)(B) addresses the establishment of physical interconnection, it does not address particular compensation arrangements for interconnection between carriers, which Congress has now addressed in sections 251 and 252.[2424] Parties further note that the language in section 332(c)(1), stating that "this subparagraph shall not be construed as a limitation or expansion of the Commission's authority to order interconnection" expressly limits the Commission's authority to respond to a CMRS provider's request for interconnection and thus does not give the Commission jurisdiction over LEC-CMRS interconnection rates.[2425] BellSouth further argues that subjecting CMRS providers' charges for termination of LEC-originated calls to federal preemption would be inconsistent with Congress's

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[2419] *See e.g.*, Cox comments at 43-44; *Ex Parte* letter in CC Docket No. 95-185 from Robert F. Roche, CTIA, to William F. Caton, Acting Secretary, FCC, February 28, 1996, at 1.

[2420] *See, e.g.*, Cox reply in CC Docket No. 95-185 at 69-70.

[2421] Cox Feb. 28 *Ex Parte* in CC Docket No. 95-185 at 8. Section 271(c)(1)(A) provides that, as one of the preconditions for BOC entry into the in-region, interLATA services market, a BOC must demonstrate the presence of a facilities-based competitor that provides telephone exchange service to residential and business subscribers. This section further provides that, "[f]or the purpose of this subparagraph, services provided pursuant to subpart K of part 22 of the Commission's regulations [cellular], . . . shall not be considered to be telephone exchange services." 47 U.S.C. § 271(c)(1)(A).

[2422] *See, e.g.*, USTA comments at 66-67; NYNEX comments at 23; PacTel comments at 83, reply at 38; Bell Atlantic/NYNEX Mobile comments at 7; BellSouth comments at 63; Pennsylvania Commission comments at 34.

[2423] *See, e.g.*, PacTel reply at 38; U S West comments at 61; *Ex Parte* letter in CC Docket No. 95-185 from Michael K. Kellogg, Counsel for Bell Atlantic and PacTel, to William F. Caton, Acting Secretary, FCC, February 26, 1996, at 4; BellSouth comments in CC Docket No. 95-185 at 34; Pennsylvania Commission comments at 34-35.

[2424] NYNEX reply at 13.

[2425] Ameritech comments in CC Docket No. 95-185 at 11; BellSouth comments in CC Docket No. 95-185 at 34-35.

determination in the 1996 Act that the terms and conditions of interconnection are to be decided by negotiation among LECs and telecommunications carriers, subject to the state review process.[2426]

3. Discussion

1022. Several parties in this proceeding argue that sections 251 and 252 provide the exclusive jurisdictional basis for regulation of LEC-CMRS interconnection rates.[2427] Other parties assert that sections 332 and 201 provide the exclusive jurisdictional basis for regulation of LEC-CMRS interconnection rates.[2428] Some parties have argued that jurisdiction resides concurrently under sections 251 and 252, on the one hand, and under sections 332 and 201 on the other.[2429]

1023. Sections 251, 252, 332 and 201 are designed to achieve the common goal of establishing interconnection and ensuring interconnection on terms and conditions that are just, reasonable, and fair. It is consistent with the broad authority of these provisions to hold that we may apply sections 251 and 252 to LEC-CMRS interconnection. By opting to proceed under sections 251 and 252, we are not finding that section 332 jurisdiction over interconnection has been repealed by implication, or rejecting it as an alternative basis for jurisdiction. We acknowledge that section 332 in tandem with section 201 is a basis for jurisdiction over LEC-CMRS interconnection; we simply decline to define the precise extent of that jurisdiction at this time.

1024. As a practical matter, sections 251 and 252 create a time-limited negotiation and arbitration process to ensure that interconnection agreements will be reached between incumbent LECs and telecommunications carriers, including CMRS providers. We expect that our establishment of pricing methodologies and default proxies which may be used as interim rates will help expedite the parties' negotiations and drive voluntary CMRS-LEC interconnection agreements. We also believe that sections 251 and 252 will foster regulatory parity in that these provisions establish a uniform regulatory scheme governing interconnection between incumbent LECs and all requesting carriers, including CMRS providers. Thus, we believe that sections 251 and 252 will facilitate consistent resolution of interconnection issues for CMRS providers and other carriers requesting interconnection.

[2426] BellSouth comments in CC Docket No. 95-185 at 35.

[2427] *See, e.g.*, USTA comments at 66-67; NYNEX comments at 23; PacTel comments at 83, reply at 38; Bell Atlantic/NYNEX Mobile comments at 7; BellSouth comments at 63; Pennsylvania Commission comments at 34.

[2428] *See, e.g.*, Cox comments in CC Docket No. 95-185 at 43-44; CTIA comments in CC Docket No. 95-185 at 62; Omnipoint comments at 12; Vanguard comments at 15.

[2429] *See, e.g.*, AT&T comments in CC Docket No. 95-185 at 28-30; AT&T comments at 42-44; *see also* PCIA comments in CC Docket No. 95-185 at 23-26; Century Cellunet comments in CC Docket No. 95-185 at 10-14.

1025. Although we are applying sections 251 and 252 to LEC-CMRS interconnection at this time, we preserve the option to revisit this determination in the future. We note that Section 332 generally precludes states from rate and entry regulation of CMRS providers, and thus, differentiates CMRS providers from other carriers.[2430] We also recognize that, based on the combined record in CC Docket No. 95-185 and CC Docket No. 96-68, there have been instances in which state commissions have treated CMRS providers in a discriminatory manner with respect to the terms and conditions of interconnection.[2431] Should the Commission determine that the regulatory scheme established by sections 251 and 252 does not sufficiently address the problems encountered by CMRS providers in obtaining interconnection on terms and conditions that are just, reasonable and nondiscriminatory, the Commission may revisit its determination not to invoke jurisdiction under section 332 to regulate LEC-CMRS interconnection rates.

1026. Our decision to proceed under section 251 as a basis for regulating LEC-CMRS interconnection rates should not be interpreted as undercutting our intent to enforce Section 332(c)(3), for example, where state regulation of interconnection rates might constitute regulation of CMRS entry. In such situations, state action might be precluded by either section 332 or section 253. Such circumstances would require a case-by-case evaluation. We note, however, that we are aware of numerous specific state requirements that may constitute CMRS entry or rate regulation preempted by section 332. For example, many states, such as California, require all telecommunications providers to certify that the public convenience and necessity will be served as a precondition to construction and operation of telecommunications services within the state.[2432] Some states, such as Alaska and Connecticut, also require CMRS providers to certify as service providers other than CMRS in order to obtain the same treatment afforded other telecommunications providers under state law.[2433] Hawaii and Louisiana, in addition to imposing a certification requirement, require CMRS providers and other telecommunications carriers to file

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[2430] In passing section 332 in 1993, Congress stated that it intended to "foster the growth and development of mobile services that, by their nature, operate without regard to state lines as an integral part of the national telecommunications infrastructure." H.R. Report No. 103-11, 103d. Cong., 1st Sess. 260 (1993).

[2431] *See supra*, Section VII.D.

[2432] CAL. PUBLIC UTILITIES CODE Sections 1001,1005 (West 1995); ALASKA STAT. Section 42.05221 (1995); CONN. GEN. STAT. Section 16-247g (1995); HAW. REV. STAT. Section 269-7.5 (1995); NEB. REV. STAT. Section 86-805 (1995); N.M. STAT. ANN. Section 63-9B-4 (Michie 1996).

[2433] *See In the Matter of Motion for a Declaratory Ruling Concerning Preemption of Alaska Call Routing and Interexchange Certification Regulation as Applies to Cellular Carriers*, File No. WTB/POL 95-2, *Motion for a Declaratory Ruling*, Alaska-3 Cellular d/b/a CellularOne, p.5, para. 11 (filed Sept. 22, 1995); *Decision, Investigation Into Wireless Mutual Compensation Plans*, State of Connecticut, Department of Public Utility control, at 15 (Connecticut Commission Sept. 22, 1995).

tariffs with the state commission.[2434] We will not permit entry regulation through the exercise of states' sections 251/252 authority or otherwise. In this regard, we note that states may not impose on CMRS carriers rate and entry regulation as a pre-condition to participation in interconnection agreements that may be negotiated and arbitrated pursuant to sections 251 and 252. We further note that the Commission is reviewing filings made pursuant to section 253 alleging that particular states or local governments have requirements that constitute entry barriers, in violation of section 253. We will continue to review any allegations on an ongoing basis, including any claims that states or local governments are regulating entry or imposing requirements on CMRS providers that constitute barriers to market entry.

[2434] HAW. REV. STAT. Section 6-80-29 (1996); *see In re Regulations for Competition in the Local Telecommunications Market*, General Order, Louisiana Public Service Commission, §§ 301, 401 (Louisiana Commission March 15, 1996).

XI. OBLIGATIONS IMPOSED ON LECS BY SECTION 251(b)[2435]

A. Reciprocal Compensation for Transport and Termination of Telecommunications

1. Statutory Language

1027. Section 251(b)(5) provides that all LECs, including incumbent LECs, have the duty to "establish reciprocal compensation arrangements for the transport and termination of telecommunications."[2436] Section 252(d)(2) states that, for the purpose of compliance by an incumbent LEC with section 251(b)(5), a state commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless such terms and conditions both: (1) provide for the "mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier," and (2) "determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls."[2437] That subsection further provides that the foregoing language shall not be construed "to preclude arrangements that afford the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill and keep arrangements),"[2438] or to authorize the Commission or any state to "engage in any rate regulation proceeding to establish with particularity the additional costs of transporting or terminating calls, or require carriers to maintain records with respect to the additional costs of such calls."[2439] The legislative history indicates that "mutual and reciprocal recovery of costs . . . may include a range of compensation schemes, such as in-kind exchange of traffic without cash payment (known as bill-and-keep arrangements)."[2440]

[2435] Additional obligations imposed by section 251(b) are addressed in a separate order. *See* NPRM at paras. 202-219.

[2436] 47 U.S.C. § 251(b)(5).

[2437] 47 U.S.C. § 252(d)(2)(A).

[2438] *Id.* at § 252(d)(2)(B)(i).

[2439] *Id.* at § 252(d)(2)(B)(ii).

[2440] Joint Explanatory Statement at 7.

2. Definition of Transport and Termination of Telecommunications

a. Background

1028. In the NPRM, we sought comment on whether "transport and termination of telecommunications" under section 251(b)(5) is limited to certain types of traffic.[2441] We noted that the statutory provision appears to encompass telecommunications traffic that originates on the network of one LEC and terminates on the network of a competing provider in the same local service area as well as traffic passing between LECs and CMRS providers.[2442] We sought comment on whether section 251(b)(5) also encompasses telecommunications traffic passing between neighboring LECs that do not compete with one another.[2443] We also observed in the NPRM that section 252(d)(2) is entitled "Charges for Transport and Termination of Traffic," and it could be interpreted to permit separate charges for these two components of reciprocal compensation.[2444] We sought comment on this issue.

b. Comments

1029. Numerous commenters contend that section 251(b)(5) applies to traffic originating on the network of one LEC and terminating on the network of another LEC, including both the traffic exchanged between competing LECs and traffic exchanged between neighboring LECs that do not compete with one another.[2445] The Oregon Commission points out that neither section 251 nor any other provision of the Act excludes the transport and termination of telecommunications traffic passing between neighboring LECs that do not compete with one another.[2446] Several incumbent LECs, however, contend that the requirements imposed on LECs by section 251(b), including reciprocal compensation for transport and termination of traffic, make no sense except in the context of LECs offering service in the same geographic area, because these requirements are relevant only to the competitive relationship between such carriers.[2447] In addition, several commenters contend that parties and states will need to determine the local service area within

[2441] NPRM at para. 231.

[2442] NPRM at para. 230.

[2443] *Id.*

[2444] NPRM at para. 231.

[2445] *See, e.g.*, Ohio Commission comments at 68-69; MFS comments at 76; Time Warner comments at 85-86.

[2446] Oregon Commission comments at 35.

[2447] PacTel comments at 95-96; NYNEX comments at 85; *see also* Florida Commission comments at 38-39.

which the compensation right applies.[2448] RTC asserts that elimination of multicompany existing extended area service (EAS)[2449] would cause great rate disruption around the country.[2450]

1030. A wide range of commenters also contend that reciprocal compensation should apply to arrangements between CMRS providers and LECs.[2451] Numerous commenters in the *LEC-CMRS Interconnection* proceeding have argued that CMRS providers do not receive reciprocal compensation for the transport and termination of traffic from incumbent LECs,[2452] and in some cases incumbent LECs require CMRS providers to compensate the LEC for wireline-originated traffic terminated on their wireless systems.[2453] PageNet, however, contends that section 251 is not directly applicable to interconnection arrangements between incumbent LECs and CMRS providers.[2454] Instead, it argues that incumbent LEC to CMRS interconnection is governed by section 332 of the 1934 Act.[2455] Several wireless providers argue that neither CMRS nor traditional paging service fits the Act's definition of a local exchange service and, therefore, these services are exempt from section 251(b) requirements.[2456] Paging companies commented in the *LEC-CMRS Interconnection* proceeding that, despite the fact that paging companies must terminate incoming incumbent LEC calls, the paging companies pay the LECs for call

[2448] *See* GTE comments at 54; Continental comments at 12-13 (asserting that a new entrant should not be required to pay toll access charges to terminate its customers within its local calling area); NCTA reply at 17 (arguing that the Commission should reject incumbent LECs' arguments that reciprocal compensation arrangements between incumbent LECs and competitive LECs are only applicable to the termination of incumbent LEC-defined local traffic). *But see* PacTel reply at 48 (arguing that transport and termination does not extend to all intraLATA calls because such a requirement would read access charges out of the Act).

[2449] EAS is considered an interexchange service between non-competing LECs.

[2450] RTC reply at v; *see also* GVNW comments at 41 (Historical interconnection arrangements between neighboring incumbent LECs should not be used as a basis for determining appropriate compensation between carriers competing in the same service areas under a statutory mandate to base compensation on the cost of terminating a call).

[2451] *See, e.g.*, Ohio Commission comments at 68-69; NYNEX comments at 85; ProNet comments at 11-12.

[2452] *See, e.g.*, RCC comments in CC Docket No. 95-185 at 5; 360 Degrees comments in CC Docket No. 95-185 at 3; Western Wireless comments in CC Docket No. 95-185 at 13; Omnipoint reply in CC Docket No. 95-185 at 3-7.

[2453] *See, e.g.*, CMT Partners comments in CC Docket No. 95-185 at 4; Century Cellunet comments in CC Docket No. 95-185 at 4; Nextel Communications comments in CC Docket No. 95-185 at 5; Centennial Cellular Corp. comments in CC Docket No. 95-185 at 9.

[2454] PageNet comments at 12-14.

[2455] *Id.; see also* PCIA comments at 1-12; Mobilemedia comments at 5-12; Arch comments at 17.

[2456] *See, e.g.*, ProNet comments at 7; Arch comments at 17; BANM comments at 2.

origination, rather than receive compensation for call termination.[2457] They also contend that paging companies should be permitted to charge reasonable call termination fees to the LECs.[2458]

1031. Incumbent LECs as well as other commenters contend that transport and termination should be treated as two distinct functions.[2459] They generally define transport as carrying traffic between switches within a network, while termination is characterized as delivering traffic through the last end-office switch to the end user.[2460] The Texas Public Utility Counsel argues that, to the extent that transport functions and call termination functions have different cost structures, the Act would mandate a two-part pricing structure.[2461] U S West notes that, while there is no natural substitute for termination, transport is interoffice and would generally be interchangeable with similar network elements or tariffed access services.[2462] In addition, Citizens Utilities contends that, depending on the location of the physical interconnection point between two carriers and each carrier's network design, the terminating carrier may or may not perform any transport service in the call delivery process.[2463] Therefore, it argues that the transport function logically should be unbundled from the termination function.[2464] USTA and potential new entrants, however, argue that transport and termination describe a single function, the costs of which should be recovered from a single charge for purposes of reciprocal compensation.[2465] GST believes that subdivision of transport and termination as a means of applying asymmetrical rate structures conflicts with the statute's command of reciprocal compensation, and gives LECs incentives to tilt the balance of payment

[2457] *See* PageNet reply in CC Docket No. 95-185 at 5.

[2458] *See, e.g.*, PageNet comments in CC Docket No. 95-185 at 25-29.

[2459] *See, e.g.*, U S West comments at 69; PacTel comments at 97; GTE comments at 18; Florida Commission comments at 39.

[2460] *See, e.g.*, U S West comments at 69; PacTel comments at 97; GTE comments at 18; BellSouth comments at 71.

[2461] Texas Public Utility Counsel comments at 49-50; *see also* Arch comments at 17-18; Florida Commission comments at 39.

[2462] U S West comments at 69. Similarly, CFA/CU argues that the availability of termination for new entrants is a monopoly enjoyed by the incumbent LEC as a legacy of its historic monopoly. CFA/CU comments at 52-53; *see also* MFS reply at 17.

[2463] Citizens Utilities comments at 29; *see also* BellSouth comments at 71.

[2464] *Id.*

[2465] USTA comments at 80; *see also* GST comments at 35-38; MFS comments at 76-77; Time Warner comments at 86-88; TCI comments at 27-28.

through their network design decisions.[2466]

1032. In addition, Sprint contends that section 251(b)(5) arguably applies to transport and termination of toll traffic as well as local traffic.[2467] Sprint contends, however, that in the context of section 252(d)(2), which establishes a pricing rule for reciprocal compensation where one of the carriers is an incumbent LEC, it appears that Congress intended to confine to local traffic the obligation of transport and termination.[2468] Several other commenters also maintain that toll traffic should remain subject to access charges and not section 251(b)(5) obligations, at least until access charge reform can be implemented.[2469] RTC argues that Congress made it clear that it did not intend the Act to change the access charge regime.[2470] Frontier, however, contends that Sprint's reliance on the wording of section 252(d)(2) as limiting the scope of section 251(b)(5) is simply misguided.[2471] Frontier argues that, at best, section 252(d)(2)'s silence regarding the pricing by an incumbent LEC simply meant that Congress did not intend to constrain the Commission decisions in the pricing of transport and termination by a non-incumbent LEC under section 252(d)(2).[2472] In sum, Frontier contends that the general principles of mutual and reciprocal compensation under section 251(b)(5) would apply to all traffic, while section 252(d)(2) applies to incumbent LEC pricing of mutual compensation involving any additional costs of transport and termination.[2473]

c. Discussion

(1) Distinction between "Transport and Termination" and Access

1033. We recognize that transport and termination of traffic, whether it originates locally or from a distant exchange, involves the same network functions. Ultimately, we believe that the rates that local carriers impose for the transport and termination of local traffic and for the transport and termination of long distance traffic should converge. We conclude, however, as a

[2466] GST comments at 35-38.

[2467] Sprint comments at 76.

[2468] *Id.* at 76-77.

[2469] *See, e.g.*, Alabama Commission comments at 32-33; PacTel comments at 95-96, 98, reply at 48; MFS comments at 76.

[2470] RTC reply at 9.

[2471] Frontier reply at 19.

[2472] *Id.*

[2473] *Id.*

legal matter, that transport and termination of local traffic are different services than access service for long distance telecommunications. Transport and termination of local traffic for purposes of reciprocal compensation are governed by sections 251(b)(5) and 252(d)(2), while access charges for interstate long-distance traffic are governed by sections 201 and 202 of the Act. The Act preserves the legal distinctions between charges for transport and termination of local traffic and interstate and intrastate charges for terminating long-distance traffic.

1034. We conclude that section 251(b)(5) reciprocal compensation obligations should apply only to traffic that originates and terminates within a local area, as defined in the following paragraph. We disagree with Frontier's contention that section 251(b)(5) entitles an IXC to receive reciprocal compensation from a LEC when a long-distance call is passed from the LEC serving the caller to the IXC. Access charges were developed to address a situation in which three carriers -- typically, the originating LEC, the IXC, and the terminating LEC -- collaborate to complete a long-distance call. As a general matter, in the access charge regime, the long-distance caller pays long-distance charges to the IXC, and the IXC must pay both LECs for originating and terminating access service.[2474] By contrast, reciprocal compensation for transport and termination of calls is intended for a situation in which two carriers collaborate to complete a local call. In this case, the local caller pays charges to the originating carrier, and the originating carrier must compensate the terminating carrier for completing the call. This reading of the statute is confirmed by section 252(d)(2)(A)(i), which establishes the pricing standards for section 251(b)(5). Section 251(d)(2)(A)(i) provides for "recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier."[2475] We note that our conclusion that long distance traffic is not subject to the transport and termination provisions of section 251 does not in any way disrupt the ability of IXCs to terminate their interstate long-distance traffic on LEC networks. Pursuant to section 251(g), LECs must continue to offer tariffed interstate access services just as they did prior to enactment of the 1996 Act. We find that the reciprocal compensation provisions of section 251(b)(5) for transport and termination of traffic do not apply to the transport or termination of interstate or intrastate interexchange traffic.

1035. With the exception of traffic to or from a CMRS network, state commissions have the authority to determine what geographic areas should be considered "local areas" for the purpose of applying reciprocal compensation obligations under section 251(b)(5), consistent with the state commissions' historical practice of defining local service areas for wireline LECs. Traffic originating or terminating outside of the applicable local area would be subject to interstate and intrastate access charges. We expect the states to determine whether intrastate transport and termination of traffic between competing LECs, where a portion of their local

[2474] In addition, both the caller and the party receiving the call pay a flat-rated interstate access charge -- the end-user common line charge -- to the respective incumbent LEC to whose network each of these parties is connected.

[2475] 47 U.S.C. § 252(d)(2)(A)(i).

service areas are not the same, should be governed by section 251(b)(5)'s reciprocal compensation obligations or whether intrastate access charges should apply to the portions of their local service areas that are different. This approach is consistent with a recently negotiated interconnection agreement between Ameritech and ICG that restricted reciprocal compensation arrangements to the local traffic area as defined by the state commission.[2476] Continental Cablevision, in an *ex parte* letter, states that many incumbent LECs offer optional expanded local area calling plans, in which customers may pay an additional flat rate charge for calls within a wider area than that deemed as local, but that terminating intrastate access charges typically apply to calls that originate from competing carriers in the same wider area.[2477] Continental Cablevision argues that local transport and termination rates should apply to these calls. We lack sufficient record information to address the issue of expanded local area calling plans; we expect that this issue will be considered, in the first instance, by state commissions. In addition, we expect the states to decide whether section 251(b)(5) reciprocal compensation provisions apply to the exchange of traffic between incumbent LECs that serve adjacent service areas.

1036. On the other hand, in light of this Commission's exclusive authority to define the authorized license areas of wireless carriers, we will define the local service area for calls to or from a CMRS network for the purposes of applying reciprocal compensation obligations under section 251(b)(5).[2478] Different types of wireless carriers have different FCC-authorized licensed territories, the largest of which is the "Major Trading Area" (MTA).[2479] Because wireless licensed territories are federally authorized, and vary in size, we conclude that the largest FCC-authorized wireless license territory (*i.e.*, MTA) serves as the most appropriate definition for local service area for CMRS traffic for purposes of reciprocal compensation under section 251(b)(5) as it avoids creating artificial distinctions between CMRS providers. Accordingly, traffic to or from a CMRS network that originates and terminates within the same MTA is subject to transport and termination rates under section 251(b)(5), rather than interstate and intrastate access charges.

1037. We conclude that section 251(b)(5) obligations apply to all LECs in the same state-defined local exchange service areas, including neighboring incumbent LECs that fit within this description. Contrary to the arguments of NYNEX and Pacific Telesis, neither the plain language of the Act nor its legislative history limits this subsection to the transport and termination of telecommunications traffic between new entrants and incumbent LECs. In addition, applying

[2476] *See* letter from Albert H. Kramer, Dickstein, Shapiro, Morin & Oshinsky LLP to John Nakahata, Senior Legal Advisor to the Chairman, FCC, July 11, 1996.

[2477] Letter from Brenda L. Fox, Vice President, Federal Relations, Continental Cablevision, to Robert Pepper, Chief, Office of Plans and Policy, FCC, July 22, 1996, attached to Letter from Donna N. Lampert, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., to William F. Caton, Acting Secretary, FCC, July 22, 1996.

[2478] *See also infra*, Section XI.A.c.3.

[2479] *See* Rand McNally, Inc., *1992 Commercial Atlas & Marketing Guide* 38-39 (1992).

section 251(b)(5) obligations to neighboring incumbent LECs in the same local exchange area is consistent with our decision that all interconnection agreements, including agreements between neighboring LECs, must be submitted to state commissions for approval pursuant to section 252(e).[2480]

1038. Under section 252, neighboring states may establish different rate levels for transport and termination of traffic.[2481] In cases in which territory in multiple states is included in a single local service area, and a local call from one carrier to another crosses state lines, we conclude that the applicable rate for any particular call should be that established by the state in which the call terminates. This provides an administratively convenient rule, and termination of the call typically occurs in the same state where the terminating carrier's end office switch is located and where the cost of terminating the call is incurred.

(2) Distinction between "Transport" and "Termination"

1039. We conclude that transport and termination should be treated as two distinct functions. We define "transport," for purposes of section 251(b)(5), as the transmission of terminating traffic that is subject to section 251(b)(5) from the interconnection point between the two carriers to the terminating carrier's end office switch that directly serves the called party (or equivalent facility provided by a non-incumbent carrier). Many alternative arrangements exist for the provision of transport between the two networks. These arrangements include: dedicated circuits provided either by the incumbent LEC, the other local service provider, separately by each, or jointly by both; facilities provided by alternative carriers; unbundled network elements provided by incumbent LECs; or similar network functions currently offered by incumbent LECs on a tariffed basis. Charges for transport subject to section 251(b)(5) should reflect the forward-looking cost of the particular provisioning method.

1040. We define "termination," for purposes of section 251(b)(5), as the switching of traffic that is subject to section 251(b)(5) at the terminating carrier's end office switch (or equivalent facility) and delivery of that traffic from that switch to the called party's premises. In contrast to transport, for which some alternatives exist, alternatives for termination are not likely to exist in the near term. A carrier or provider typically has no other mechanism for delivering traffic to a called party served by another carrier except by having that called party's carrier terminate the call. In addition, forward-looking costs are calculated differently for the transport of traffic and the termination of traffic, as discussed above in the unbundled elements section.[2482]

[2480] *See supra*, Section III.D.

[2481] We discuss the methodology states should follow in establishing transport and termination rates *infra*, Section XI.A.3.c.(3).

[2482] *See infra*, Section VII.B.2.

As such, we conclude that we need to treat transport and termination as separate functions -- each with its own cost. With respect to GST's contention that separate charges for transport and termination of traffic will allow incumbent LECs to "game" the system through network design decisions, we conclude in the interconnection section above that interconnecting carriers may interconnect at any technically feasible point.[2483] We find that this sufficiently limits LECs' ability to disadvantage interconnecting parties through their network design decisions.

(3) CMRS-Related Issues

1041. Section 251(b)(5) obligates LECs to establish reciprocal compensation arrangements for the transport and termination of telecommunications traffic. Although section 252(b)(5) does not explicitly state to whom the LEC's obligation runs, we find that LECs have a duty to establish reciprocal compensation arrangements with respect to local traffic originated by or terminating to any telecommunications carriers. CMRS providers are telecommunications carriers and, thus, LECs' reciprocal compensation obligations under section 251(b)(5) apply to all local traffic transmitted between LECs and CMRS providers.

1042. We conclude that, pursuant to section 251(b)(5), a LEC may not charge a CMRS provider or other carrier for terminating LEC-originated traffic. Section 251(b)(5) specifies that LECs and interconnecting carriers shall compensate one another for termination of traffic on a reciprocal basis. This section does not address charges payable to a carrier that originates traffic. We therefore conclude that section 251(b)(5) prohibits charges such as those some incumbent LECs currently impose on CMRS providers for LEC-originated traffic. As of the effective date of this order, a LEC must cease charging a CMRS provider or other carrier for terminating LEC-originated traffic and must provide that traffic to the CMRS provider or other carrier without charge.

1043. As noted above, CMRS providers' license areas are established under federal rules, and in many cases are larger than the local exchange service areas that state commissions have established for incumbent LECs' local service areas.[2484] We reiterate that traffic between an incumbent LEC and a CMRS network that originates and terminates within the same MTA (defined based on the parties' locations at the beginning of the call) is subject to transport and termination rates under section 251(b)(5), rather than interstate or intrastate access charges. Under our existing practice, most traffic between LECs and CMRS providers is not subject to interstate access charges unless it is carried by an IXC, with the exception of certain interstate interexchange service provided by CMRS carriers, such as some "roaming" traffic that transits

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[2483] *See supra*, Section IV.F..

[2484] *See* 47 C.F.R. §§ 22.911, 24.202; *see also* PCIA comments in CC Docket No. 95-185 at 21-22; Letter from Leonard J. Kennedy, on behalf of Comcast Cellular Communications, to William Caton, Acting Secretary, FCC, July 25, 1996.

incumbent LECs' switching facilities, which is subject to interstate access charges.[2485] Based on our authority under section 251(g) to preserve the current interstate access charge regime, we conclude that the new transport and termination rules should be applied to LECs and CMRS providers so that CMRS providers continue not to pay interstate access charges for traffic that currently is not subject to such charges, and are assessed such charges for traffic that is currently subject to interstate access charges.[2486]

1044. CMRS customers may travel from location to location during the course of a single call, which could make it difficult to determine the applicable transport and termination rate or access charge.[2487] We recognize that, using current technology, it may be difficult for CMRS providers to determine, in real time, which cell site a mobile customer is connected to, let alone the customer's specific geographic location.[2488] This could complicate the computation of traffic flows and the applicability of transport and termination rates, given that in certain cases, the geographic locations of the calling party and the called party determine whether a particular call should be compensated under transport and termination rates established by one state or another, or under interstate or intrastate access charges. We conclude, however, that it is not necessary for incumbent LECs and CMRS providers to be able to ascertain geographic locations when determining the rating for any particular call at the moment the call is connected. We conclude that parties may calculate overall compensation amounts by extrapolating from traffic studies and samples. For administrative convenience, the location of the initial cell site when a call begins shall be used as the determinant of the geographic location of the mobile customer. As an

[2485] "[S]ome cellular carriers provide their customers with a service whereby a call to a subscriber's local cellular number will be routed to them over interstate facilities when the customer is "roaming" in a cellular system in another state. In this case, the cellular carrier is providing not local exchange service but interstate, interexchange service. In this and other situations where a cellular company is offering interstate, interexchange service, the local telephone company providing interconnection is providing exchange access to an interexchange carrier and may expect to be paid the appropriate access charge . . . . Therefore, to the extent that a cellular operator does provide interexchange service through switching facilities provided by a telephone company, its obligation to pay carrier's carrier [*i.e.*, access] charges is defined by § 69.5(b) of our rules." *The Need to Promote Competition and Efficient Use of Spectrum for Radio Common Carrier Services*, 59 RR 2d 1275, 1284-85 n.3 (1986). *See also Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services*, GN Docket No. 93-252, Second Report and Order, 9 FCC Rcd 1411, 1497-98 (1994) (concluding that there should be no distinction between incumbent LECs' interconnection arrangements with cellular carriers and those with other CMRS providers).

[2486] *See also, supra*, XI.A.2.c.(1).

[2487] In the *LEC-CMRS Interconnection NPRM*, we observed that a significant amount of LEC-CMRS traffic crosses state lines, because CMRS service areas often cross state lines and CMRS customers are mobile. *LEC CMRS Interconnection NPRM* at para. 112.

[2488] *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, RM-8143, Report and Order and Further Notice of Proposed Rulemaking, FCC 96-264 at paras. 8-9 (adopted June 12, 1996, released July 26, 1996).

alternative, LECs and CMRS providers can use the point of interconnection between the two carriers at the beginning of the call to determine the location of the mobile caller or called party.

1045. As discussed above, pursuant to section 251(b)(5) of the Act, all local exchange carriers, including small incumbent LECs and small entities offering competitive local exchange services, have a duty to establish reciprocal compensation arrangements for the transport and termination of local exchange service. CMRS providers, including small entities, and LECs, including small incumbent LECs and small entity competitive LECs, will receive reciprocal compensation for terminating certain traffic that originates on the networks of other carriers, and will pay such compensation for certain traffic that they transmit and terminate to other carriers. We believe that these arrangements should benefit all carriers, including small incumbent LECs and small entities, because it will facilitate competitive entry into new markets while ensuring reasonable compensation for the additional costs incurred in terminating traffic that originates on other carriers' networks. We also recognize that, to implement transport and termination pursuant to section 251(b)(5), carriers, including small incumbent LECs and small entities, may be required to measure the exchange of traffic, but we believe that the cost of such measurement to these carriers is likely to be substantially outweighed by the benefits of these arrangements.[2489]

3. Pricing Methodology

a. Background

1046. In the NPRM, we sought comment on how to interpret section 252(d)(2) of the Act.[2490] Specifically, we asked if we should establish a generic pricing methodology or impose a ceiling to guide the states in setting the charge for the transport and termination of traffic. We also asked whether such a generic pricing methodology or ceiling should be established using the same principles we adopt for interconnection and unbundled elements.[2491] Additionally, we sought comment on the use of an interim and transitional pricing mechanism that would address concerns about unequal bargaining power in negotiations.[2492]

[2489] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

[2490] NPRM at para. 234.

[2491] NPRM at para. 234.

[2492] NPRM at para. 244.

b. Comments

1047. Time Warner argues that call termination is an essential element in completing calls and that this last "bottleneck" should be governed by a lower cost standard than elements that are based on a competitor's "make or buy decisions."[2493] MCI contends that the level of compensation for transport and termination should be determined by calculating the TSLRIC incurred by the incumbent in providing the network elements necessary to terminate the local calls originating on the networks of its competitors, and converting that cost to a per-minute rate.[2494] Cox asserts that section 252(d)(2) requires that competing carriers have mutual obligations to terminate traffic that originates on competitors' networks, and that this obligation requires that the rate for transport and termination be less than the rate charged for unbundled elements.[2495] Cox advocates the use of LRIC, as opposed to TSLRIC, methodology to set transport and termination rates because LRIC recognizes only the cost of capital expenditures to provide the additional terminations and transport required by a competitive local service provider, including maintenance and depreciation of those facilities, without any allocation of overhead.[2496]

1048. BellSouth argues that the recovery of transport and termination costs should include joint and common costs and that no LEC can charge rates for transport and termination in excess of access charges because potential customers would simply choose arrangements under the latter.[2497] The Western Alliance asserts that rates for the transport and termination of traffic must allow rural LECs to recover the incremental cost of local access, a reasonable apportionment of joint and common costs, and any lost contribution to basic, local service rates represented by the interconnecting carriers' service.[2498] The Western Alliance argues that recovery of lost contribution is especially important for smaller LECs because they are unlikely to have alternative sources from which to support basic service rates.[2499] USTA argues rates should be based on existing prices (*i.e.* access charges) because this would not require small and mid-sized incumbent

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[2493] Time Warner comments at 50. "Make or buy decision" is Time Warner's term for deciding between providing services through its own facilities or through resale and/or purchasing unbundled elements.

[2494] MCI comments at 48-49; *see also* NCTA comments at 47-50; Comcast comments at 22; Competition Policy Institute reply at 15.

[2495] Cox comments at 34; *see also* Sprint Spectrum/APC comments at 8-9.

[2496] Cox comments at 25-26; *see also* GST comments at 38-40; MFS comments at 80-81. We note above that TSLRIC is one instance of LRIC where the increment chosen is the provision of the entire service.

[2497] BellSouth comments at 70-72; *see also* MECA comments at 5; and Mass. Commission comments at 8-9.

[2498] Western Alliance comments at 5.

[2499] *Id. at* 7 n. 14.

LECs to conduct cost studies that could bog down the interconnection negotiation process.[2500] GTE claims that the "additional costs incurred" language undermines the contention that cost studies must assume the most efficient technology available because costs are incurred using actual network technology, not a theoretical network.[2501]

1049. The Illinois Commission asserts that the two different pricing standards in sections 252(d)(1)(A)(i) and 252(d)(2)(A)(ii) are not mutually exclusive and the text of the two provisions does not prohibit the states from using identical pricing standards for the two categories of service. The Illinois Commission notes that there is some substitutability between unbundled network elements and incumbent LEC transport and termination of a competitor's traffic. Consequently, the Illinois Commission contends that two widely disparate policies for the pricing of these services may have potentially distorting effects.[2502] The Illinois Commission further argues that section 252(d)(2)(B)(ii) does not prohibit rate regulation proceedings to establish transport and termination costs and does not bar a state from requiring carriers to maintain records regarding transport and termination costs, if authority exists independently of the 1996 Act.[2503] GST argues that section 252(d)(2)(B)(ii)'s prohibition against use of cost studies to set transport and termination rates suggests Congress intended for compensation prices to be set on the basis of economically relevant costs, not on the basis of artificial regulatory mechanisms, such as separations, revenue requirements, or a carrier's embedded investment.[2504]

1050. The Ohio Commission asserts that states should establish a price ceiling for transport and termination of local traffic on the basis of an imputation test. The Ohio Commission argues that the ceiling price for transport and termination of local traffic should be such that it allows the incumbent LEC to pass an imputation test for local traffic in the aggregate (*i.e.*, flat-rated, message, and measured local residence and business traffic) at the end user rate levels.[2505] Similarly, MFS suggests that the Commission adopt a rate equal to one half of the retail rate because, as a general rule, call origination and billing can be presumed to be equal to the cost of transport and termination.[2506] Jones Intercable contends that the Commission should

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[2500] USTA comments at 54-55.

[2501] GTE reply at 30; *see also* PacTel reply at 45-46.

[2502] Illinois Commission comments at 76-77; *see also* California Commission comments at 42; ACSI comments at 10-11; Ohio Commission comments at 70-71; Texas Public Utility Counsel comments at 1, 50; Lincoln Tel. comments at 20; Citizens Utilities comments at 32-33.

[2503] Illinois Commission comments at 78; *see also* California Commission comments at 43-44.

[2504] GST comments at 39.

[2505] Ohio Commission comments at 71-72, 78-79.

[2506] MFS comments at 87.

establish a presumption that all LECs can offer traffic termination at a rate that is no higher than the lowest rate that has been agreed to (or imposed through arbitration) for such traffic termination by *any* LEC. Jones Intercable adds that such a rule is immensely practical because it relieves competitors of the need to fight the same battle in all fifty states.[2507]

1051. The California Commission asserts that ceilings for transport and termination present problems because a ceiling based on, for example, switched access rates would have to take into account widely varying rates among states. The California Commission is also opposed to price floors for call termination because they may conflict with bill-and-keep arrangements.[2508] GST opposes the use of access charges to set reciprocal transport and termination rates because access charges are fundamentally based on rates of return.[2509] TCI argues that there has been sufficient evidence compiled in state proceedings for the Commission to determine the price ceiling based on existing TSLRIC studies and suggests a price ceiling of 0.4 cents per minute of use.[2510] The Illinois and Maryland commissions have adopted rates for the termination of traffic based on incremental cost studies. The Illinois Commission has adopted a rate equal to 0.5 cents ($0.005) per minute of use for termination from the end office switch. Maryland has adopted a rate equal to 0.3 cents ($0.003) per minute of use for termination from the end office switch. Both commissions adopted slightly higher rates for transport and termination via tandem switches equal to 0.5 cents ($0.005) in Maryland and 0.75 cents ($0.0075) in Illinois.[2511]

1052. Most commenters support the requirement that dedicated transport services be priced on a flat-rated basis.[2512] For example, the Ohio Commission asserts that all LECs should offer a reciprocal compensation structure that consists of both flat-rated elements and usage-sensitive elements, in order to satisfy the requirement that the rate structure reflect the way in which costs are incurred by the providing LEC.[2513] According to Lincoln Telephone, the connection between an incumbent LEC's central office and an interconnector's network should be

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[2507] Jones Intercable comments at 29-30.

[2508] California Commission comments at 43; *see also* Florida Commission comments at 40 (setting charges for the transport and termination of local exchange traffic should be left up to the states because of the unique geographical and demographic characteristics of each state).

[2509] GST comments at 39-40.

[2510] TCI comments at 40-43.

[2511] These cost studies, and others, are discussed in greater detail in *supra.*, Section VII.C.3.

[2512] *See, e.g.*, USTA comments at 80; Time Warner comments at 91-92; NEXTLINK comments at 34-35; Mass. Attorney General comments at 16-17, 22-23; CFA/CU comments at 51; Washington Commission comments at 3; Sprint comments at 79.

[2513] Ohio Commission comments at 68-69.

priced as a flat-rated unbundled network element.[2514] The Massachusetts Attorney General recommends that termination charges be flat-rated and capacity-based.[2515] This capacity-based, flat-rated reciprocal compensation charge would be based on port charges, measured at the peak busy hour of the month, to determine the relative traffic flow over the respective networks. The Massachusetts Attorney General further argues that, in a highly competitive market where services and prices would be continuously changing, rates charged by minutes of use will distort marketing and investment decisions away from the efficient path.[2516] Cox contends capacity-cost approaches should be used as the basic standard for setting transport and termination rates because costs are incurred in that manner.[2517] Additionally, Cox argues a capacity-cost approach addresses peak-load pricing problems because an interconnecting carrier is effectively reserving and paying for a slice of capacity on a full-time basis.[2518] Other carriers support a per-minute charge for transport and termination.[2519] In addition to a rate based on minutes of use, the Maryland Commission does not oppose flat-rated options for termination of traffic based on capacity costs measured at peak hours.[2520] BellSouth adds that usage-based charging is relatively more favorable to smaller competitors and facilities-based charging is relatively more favorable to larger competitors.[2521]

1053. Numerous new entrants and state commissions support the use of an interim pricing mechanism and support the use of bill and keep as such an interim measure.[2522] In the *LEC-CMRS Interconnection* proceeding, most CMRS providers argue in support of an interim pricing approach for transport and termination arrangements while long-term solutions are pursued.[2523]

[2514] Lincoln Tel. comments at 22.

[2515] Mass. Attorney General comments at 15-16.

[2516] Mass. Attorney General comments at 16-17; *see also* CFA/CU comments at 55-56; Washington Commission comments at 3.

[2517] Cox comments at Exhibit 3 (Bargaining Incentives and Interconnection), p. 7.

[2518] *Id.*

[2519] *See, e.g.*, MCI comments at 48-49; SBC comments at 50 n.91.

[2520] Maryland Commission comments at Attachment (Maryland Commission Order No. 72348), p. 33.

[2521] BellSouth comments at Attachment (Interconnection and Economic Efficiency), p. 11.

[2522] *See, e.g.*, GST comments at 34-35; AT&T comment at 69; Cox comments at 27-28, 38; Sprint comments at 87; Jones Intercable comments at 28-29; Citizens Utilities comments at 30; Telecommunication Resellers Ass'n comments at 54-55.

[2523] *See, e.g.*, AirTouch comments in CC Docket No. 95-185 at 38-39.

Cincinnati Bell asserts that the suggestion that an interim mechanism may be necessary to offset bargaining power of incumbent LECs incorrectly assumes that the incumbent LEC will always have greater bargaining power in the process of negotiations.[2524] Cincinnati Bell argues that, to the contrary, small and mid-size LECs will be at a disadvantage when they negotiate with large corporations.[2525] LECs generally argue that, under the 1996 Act, the Commission is precluded from creating an interim pricing regime, and point to section 251(d)(3), which preserves state regulations over the obligations of LECs in certain circumstances, to support their argument.[2526]

c. Discussion

(1) Statutory Standard

1054. We conclude that the pricing standards established by section 252(d)(1) for interconnection and unbundled elements, and by section 252(d)(2) for transport and termination of traffic, are sufficiently similar to permit the use of the same general methodologies for establishing rates under both statutory provisions. Section 252(d)(2) states that reciprocal compensation rates for transport and termination shall be based on "a reasonable approximation of the additional costs of terminating such calls."[2527] Moreover, there is some substitutability between the new entrant's use of unbundled network elements for transporting traffic and its use of transport under section 252(d)(2). Depending on the interconnection arrangements, carriers may transport traffic to the competing carriers' end offices or hand traffic off to competing carriers at meet points for termination on the competing carriers' networks. Transport of traffic for termination on a competing carrier's network is, therefore, largely indistinguishable from transport for termination of calls on a carrier's own network. Thus, we conclude that transport of traffic should be priced based on the same cost-based standard, whether it is transport using unbundled elements or transport of traffic that originated on a competing carrier's network. We, therefore, find that the "additional cost" standard permits the use of the forward-looking, economic cost-based pricing standard that we are establishing for interconnection and unbundled elements.[2528]

[2524] Cincinnati Bell comments at 25-26.

[2525] *Id.*

[2526] *See, e.g.*, BellSouth comments in CC Docket No. 95-185 at 32.

[2527] 47 U.S.C. § 252(d)(2)(A)(ii).

[2528] *See supra*, Section VII.B.

(2) Pricing Rule

1055. States have three options for establishing transport and termination rate levels. A state commission may conduct a thorough review of economic studies prepared using the TELRIC-based methodology outlined above in the section on the pricing of interconnection and unbundled elements.[2529] Alternatively, the state may adopt a default price pursuant to the default proxies outlined below. If the state adopts a default price, it must either commence review of a TELRIC-based economic cost study, request that this Commission review such a study, or subsequently modify the default price in accordance with any revised proxies we may adopt. As previously noted, we intend to commence a future rulemaking on developing proxies using a generic cost model, and to complete such proceeding in the first quarter of 1997. As a third alternative, in some circumstances states may order a "bill and keep" arrangement, as discussed below.

(3) Cost-Based Pricing Methodology

1056. Consistent with our conclusions about the pricing of interconnection and unbundled network elements, we conclude that states that elect to set rates through a cost study must use the forward-looking economic cost-based methodology, which is described in greater detail above, in establishing rates for reciprocal transport and termination when arbitrating interconnection arrangements.[2530] We find that section 252(d)(2)(B)(ii), which indicates that section 252(d)(2) shall not be construed to "authorize the Commission or any State to engage in any rate regulation proceeding to establish with particularity the additional costs of transporting or terminating calls,"[2531] does not preclude states or this Commission from reviewing forward-looking economic cost studies. First, we believe that Congress intended the term "rate regulation proceeding" in section 252(d)(2)(B)(ii) to mean the same thing as "a rate-of-return or other rate-based proceeding" in section 252(d)(1)(A)(i). In the section on the pricing of interconnection and unbundled elements above, we conclude that the statutory prohibition of the use of such proceedings is intended to foreclose the use of traditional rate case proceedings using rate-of-return regulation. Moreover, forward-looking economic cost studies typically involve "a reasonable approximation of the additional cost,"[2532] rather than determining such costs "with particularity," such as by measuring labor costs with detailed time and motion studies.

1057. We find that, once a call has been delivered to the incumbent LEC end office

[2529] *Id.*

[2530] *See supra*, Section VII.B. for a complete discussion of forward-looking economic cost-based methodology.

[2531] 47 U.S.C. § 252(d)(2)(B)(ii).

[2532] 47 U.S.C. § 252(d)(2)(A)(ii).

serving the called party, the "additional cost" to the LEC of terminating a call that originates on a competing carrier's network primarily consists of the traffic-sensitive component of local switching. The network elements involved with the termination of traffic include the end-office switch and local loop. The costs of local loops and line ports associated with local switches do not vary in proportion to the number of calls terminated over these facilities.[2533] We conclude that such non-traffic sensitive costs should not be considered "additional costs" when a LEC terminates a call that originated on the network of a competing carrier. For the purposes of setting rates under section 252(d)(2), only that portion of the forward-looking, economic cost of end-office switching that is recovered on a usage-sensitive basis constitutes an "additional cost" to be recovered through termination charges.

1058. Rates for termination established pursuant to a TELRIC-based methodology may recover a reasonable allocation of common costs. A rate equal to incremental costs may not compensate carriers fully for transporting and terminating traffic when common costs are present. We therefore reject the argument by some commenters that "additional costs" may not include a reasonable allocation of forward-looking common costs. We recognize that, as noted by Time Warner, call termination is an essential element in completing calls because competitors are required to use the incumbent LECs' existing networks to terminate calls to incumbent LEC customers.[2534] The 1996 Act envisions a seamless interconnection of competing networks, rather than the development of redundant, ubiquitous networks throughout the nation. In order to terminate traffic ubiquitously to other companies' local customers, all LECs are given the right to use termination services from those companies rather than construct facilities to everyone. While, on the originating end, carriers have different options to reach their revenue-paying customers -- including their own network facilities, purchasing access to unbundled elements of the incumbent LEC, or resale -- they have no realistic alternatives for terminating traffic destined for competing carriers' subscribers other than to use those carriers' networks. Thus, all carriers -- incumbent LECs as well as competing carriers -- have a greater incentive and opportunity to charge prices in excess of economically efficient levels on the terminating end. To ensure that rates for reciprocal compensation make possible efficient competitive entry, we conclude that termination rates should include an allocation of forward-looking common costs that is no greater proportionally than that allocated to unbundled local loops, which, as discussed above, should be relatively low.[2535] Additionally, we conclude that rates for the transport and termination of traffic shall not include an element that allows incumbent LECs to recover any lost contribution to basic, local service rates represented by the interconnecting carriers' service, because such an element would be

[2533] The duty to terminate calls that originate on the network of a competitor does not directly affect the number of calls routed to a particular end user and any costs that result from inadequate loop capacity are, therefore, not considered "additional costs."

[2534] Time Warner comments at 50.

[2535] *See supra*, Section VII.C.2.b.(1).

inconsistent with the statutory requirement that rates for transport and termination be based on additional costs.[2536] In the section addressing prices for unbundled elements we conclude that the ECPR, which would allow incumbent LECs to recover such lost contributions, or collection of universal service costs through interconnection rates, leads to significant distortions in markets when existing retail prices are not cost-based.[2537]

1059. We also address the impact on small incumbent LECs. For example, the Western Alliance argues that it is especially important for small LECs to recover lost contributions and common costs through termination charges. We have considered the economic impact of our rules in this section on small incumbent LECs. For example, we conclude that termination rates for all LECs should include an allocation of forward-looking common costs, but find that the inclusion of an element for the recovery of lost contribution may lead to significant distortions in local exchange markets. We also note that certain small incumbent LECs are not subject to our rules under section 251(f)(1) of the 1996 Act, unless otherwise determined by a state commission, and certain other small incumbent LECs may seek relief from their state commissions from our rules under section 251(f)(2) of the 1996 Act.

(4) Default Proxies

1060. As with unbundled network elements, we recognize that it may not be feasible for some state commissions conducting or reviewing economic studies to establish transport and termination rates using our TELRIC-based pricing methodology within the time required for the arbitration process, particularly given some states' resource limitations. Thus, for the time being, we adopt a default price range of 0.2 cents ($0.002) to 0.4 cents ($0.004) per minute of use for calls handed off at the end-office switch. This default price range is based on the same proxies that apply to local switching as an unbundled network element. In establishing end-office termination rates, states may adopt a default termination price that is within our default price range or at either of the end points of the range. States should articulate the basis for selecting a particular price within this range. Thus, in arbitration proceedings, states must set the price for end office termination of traffic by: (1) using a forward-looking, economic cost study that complies with the forward-looking, economic-cost methodology set forth above; or (2) adopting a price less than or equal to 0.4 cents ($0.004) per minute, and greater than or equal to 0.2 cents ($0.002) per minute, pending the completion of such a forward-looking, economic cost study. We observe that the most credible studies in the record before us fall at the lower end of this range, and we encourage states to consider such evidence in their analysis. The adoption of a range of rates to serve as a default price range for interconnection agreements being arbitrated by the states provides carriers with a clearer understanding of the terms and conditions that will

[2536] *See* 47 U.S.C. § 252(d)(2).

[2537] *See supra*, Section VII.B.2.b. for a discussion of the effect application of the ECPR would have on the market for local exchange service.

govern them if they fail to reach an agreement and helps to reduce the transaction costs of arbitration and litigation. We also find that states that have already adopted end-office termination rates based on an approach other than a full forward-looking cost study, either through arbitration or rulemaking proceedings, may keep such rates in effect, pending their review of a forward-looking cost study, as long as they do not exceed 0.5 cents ($0.005) per minute. As discussed below, a state may also order a "bill and keep" arrangement subject to certain limitations. Additionally, our adoption of a default price range temporarily relieves small and mid-sized carriers from the burden of conducting forward-looking economic cost studies.[2538]

1061. Similarly, in establishing transport rates under sections 251(b)(5) and 252(d)(2), state commissions should be guided by the price proxies that we are establishing for unbundled transport elements discussed above.[2539] States should explain the basis for selecting a particular default price subject to the applicable ceiling. Specifically, when interconnecting carriers hand off traffic at an incumbent LEC's tandem switch (or equivalent facilities of a carrier other than an incumbent LEC), the rates for the tandem switching and transmission from the tandem switch to end offices -- a portion of the "transport" component of transport and termination rates -- should be subject to the proxies that apply to the analogous unbundled network elements. Thus, for the time being, when states set rates for tandem switching under section 252(d)(2), they may set a default price at or below the default price ceiling that applies to the tandem switching unbundled element as an alternative to reviewing a forward-looking economic cost study using our TELRIC methodology.[2540] Similarly, when states set rates for transmission facilities between tandem switches and end offices, they may establish rates equal to the default prices we are adopting for such transmission, as discussed above in the section on unbundled elements.[2541]

1062. Finally, in establishing the rates for transmission facilities that are dedicated to the transmission of traffic between two networks, state commissions should be guided by the default price level we are adopting for the unbundled element of dedicated transport.[2542] For such dedicated transport, we can envision several scenarios involving a local carrier that provides transmission facilities (the "providing carrier") and another local carrier with which it interconnects (the "interconnecting carrier"). The amount an interconnecting carrier pays for dedicated transport is to be proportional to its relative use of the dedicated facility. For example, if the providing carrier provides one-way trunks that the interconnecting carrier uses exclusively for sending terminating traffic to the providing carrier, then the interconnecting carrier is to pay the

[2538] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

[2539] *See supra*, Section VII.C.2.b.(3).

[2540] *Id.*

[2541] *Id.*

[2542] *Id.*

providing carrier a rate that recovers the full forward-looking economic cost of those trunks. The interconnecting carrier, however, should not be required to pay the providing carrier for one-way trunks in the opposite direction, which the providing carrier owns and uses to send its own traffic to the interconnecting carrier. Under an alternative scenario, if the providing carrier provides two-way trunks between its network and the interconnecting carrier's network, then the interconnecting carrier should not have to pay the providing carrier a rate that recovers the full cost of those trunks. These two-way trunks are used by the providing carrier to send terminating traffic to the interconnecting carrier, as well as by the interconnecting carrier to send terminating traffic to the providing carrier. Rather, the interconnecting carrier shall pay the providing carrier a rate that reflects only the proportion of the trunk capacity that the interconnecting carrier uses to send terminating traffic to the providing carrier. This proportion may be measured either based on the total flow of traffic over the trunks, or based on the flow of traffic during peak periods.[2543] Carriers operating under arrangements which do not comport with the principles we have set forth above, shall be entitled to convert such arrangements so that each carrier is only paying for the transport of traffic it originates, as of the effective date of this order.

(5) Rate Structure

1063. Nearly all commenters agree that flat rates, rather than usage-sensitive rates, should apply to the purchase of dedicated facilities. As discussed in the NPRM, economic efficiency may generally be maximized when non-traffic sensitive services, such as the use of dedicated facilities for the transport of traffic, are priced on a flat-rated basis.[2544] We, therefore, require all interconnecting parties to be offered the option of purchasing dedicated facilities, for the transport of traffic, on a flat-rated basis. As discussed by Lincoln Telephone, the connection between an incumbent LEC's end or tandem office and an interconnecting LEC's network is likely to be a dedicated facility. We recognize that the facility itself can be provided in a number of different ways -- by use of two service providers, by the other carrier, or jointly in a meet-point arrangement. We conclude first that, no matter what the specific arrangements, these costs should be recovered in a cost-causative manner and that usage-based charges should be limited to situations where costs are usage sensitive. In cases going to arbitration and in reviewing BOC statements of terms and conditions, the carrier actually providing the facility should presumptively be entitled to a rate that is set based on the forward-looking economic cost of providing the portion of the facility that is used for terminating traffic that originates on the network of a competing carrier. We recognize that negotiated agreements may incorporate flat-rated charges when it is efficient to do so and find that the presence of the arbitration default rule is likely to lead parties to negotiate efficient rate structures.

1064. We recognize that the costs of transporting and terminating traffic during peak and

[2543] *See infra*, Section XI.A.3.c.(5).

[2544] NPRM at para. 150.

off-peak hours may not be the same. As suggested by the Massachusetts Attorney General, rates that are the same during peak and off-peak hours may not reflect the cost of using the network and could lead to inefficient use of the network. The differences in the cost of transporting and terminating traffic during peak and off-peak hours, however, are likely to vary depending on the network, and the amount and type of traffic terminated at a particular switch. For example, peak periods may vary within a local service area depending upon whether the switch is located in a business or residential area. As a result, there may be administrative difficulties in establishing peak-load pricing schemes that may outweigh the benefits of such schemes. The negotiating parties, however, are likely to be in a position to more accurately determine how traffic patterns will adjust to peak-load pricing schemes and we encourage parties to address such pricing schemes in the negotiation process. For similar reasons, we neither require nor forbid states from adopting rates that reflect peak and off-peak costs. We hope some states will evaluate the benefits and costs of pricing schemes that consist of different rates for peak and off-peak traffic. We do require, however, that peak-load pricing schemes, adopted through the arbitration process, comply with our default price level if not based on a forward-looking cost study (*e.g.*, the average rate, weighted by the projected relative minutes of use during peak and off-peak periods, should fall within our default price range of 0.2 to 0.4 cents or the level determined by an incremental cost study).

(6) Interim Transport and Termination Rate Levels

1065. We are concerned that some new entrants that do not already have interconnection arrangements with incumbent LECs may face delays in initiating service solely because of the need to negotiate transport and termination arrangements with the incumbent LEC. In particular, a new entrant that has already constructed facilities may have a relatively weak bargaining position because it may be forced to choose either to accept transport and termination rates not in accord with these rules or to delay its commencement of service until the conclusion of the arbitration and state approval process. To promote the Act's goal of rapid competition in the local exchange, we order incumbent LECs upon request from new entrants to provide transport and termination of traffic, on an interim basis, pending resolution of negotiation and arbitration regarding transport and termination prices, and approval by the state commission. A carrier may take advantage of this interim arrangement only after it has requested negotiation with the incumbent LEC. The interim arrangement shall cease to be in effect when one of the following occurs: (1) an agreement has been negotiated and approved; (2) an agreement has been arbitrated and approved; or (3) the period for requesting arbitration has passed with no such request. We also conclude that interim prices for transport and termination shall be symmetrical. Because the purpose of this interim termination requirement is to permit parties without existing interconnection agreements to enter the market expeditiously, this requirement shall not apply with respect to requesting carriers that have existing interconnection arrangements that provide for termination of local traffic by the incumbent LEC. The ability to interconnect with an incumbent LEC prior to the completion of a forward-looking, economic cost study, based on an interim presumptive price ceiling, allows carriers, including small entrants, to enter into local exchange

service expeditiously.[2545]

1066. In states that have already conducted or reviewed forward-looking economic cost studies and promulgated transport and termination rates based on such studies, an incumbent LEC receiving a request for interim transport and termination shall use these state-determined rates as interim transport and termination rates. In states that have not conducted or reviewed a forward-looking economic cost study, but have set rates for transport and termination of traffic consistent with the default price ranges and ceilings discussed above, an incumbent LEC shall use these state-determined rates as interim rates.[2546] In states that have neither set rates consistent with the default price ceilings and ranges nor reviewed or conducted forward-looking economic cost studies, we must establish an interim default price in order to facilitate rapid competition in the local exchange market. In those states, an incumbent LEC shall set interim rates at the default ceilings for end-office switching (0.4 cents per minute of use), tandem switching (0.15 cents per minute of use), and transport described above.[2547] Using the ceiling as a default interim price, pending a state commission's completion of a forward-looking economic cost analysis, should ensure that both the incumbent LEC and the competing provider recovers no less than their full transport and termination costs. We note, however, that the most credible evidence in the record suggests that the actual forward-looking economic cost of end-office switching is closer to 0.2 cents ($0.002) per minute of use than the ceiling of 0.4 cents ($0.004) per minute of use.[2548] States must adopt "true-up" mechanisms to ensure that no carrier is disadvantaged by an interim rate that differs from the final rate established pursuant to arbitration.

1067. We conclude that section 251, in conjunction with our broad rulemaking authority under section 4(i), provides us with authority to create interim pricing rules to facilitate market entry. Because section 251(d)(1) gives the FCC authority "to establish regulations to implement the requirements of this section," we find that section 251(d)(1) gives the Commission authority to establish interim regulations that address the "just and reasonable" rates for the "reciprocal compensation" requirement of section 251(b)(5), subject to the preservation requirements of section 251(d)(3). Courts have upheld our adoption of interim compensation arrangements pursuant to our authority under section 4(i) of the 1934 Communications Act on numerous occasions in the past.[2549] In particular, we have authority, under section 4(i), to set interim rates

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[2545] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

[2546] *See supra*, Section XI.A.3.c.(4).

[2547] *Id.*

[2548] *See supra*, Section XI.A.3.c.(4).

[2549] *See New England Tel. and Tel. Co. v. FCC*, 826 F.2d 1101 (D.C. Cir 1987); *North American Telecommunications Association v. FCC*, 772 F.2d 1092 (7th Cir. 1085); *Lincoln Tel. and Tel. Co. v. FCC*, 659 F.2d (D.C. Cir. 1989).

subject to a later "true-up" when final rates are established.[2550] We therefore conclude that the default prices discussed above need not in all instances await the conclusion of the negotiation, arbitration, and state approval process set forth in section 252, but must nevertheless be in accordance with the requirements of section 251(d)(3) preserving state access regulations. We also observe that we proposed a similar interim transport and termination arrangement, albeit with different rate levels, in our NPRM in the *LEC-CMRS Interconnection* proceeding.[2551]

1068. We have considered the economic impact of our rules in this section on small incumbent LECs. For example, Cincinnati Bell asserts that interim mechanisms are not required because large corporations are not disadvantaged by unequal bargaining power in negotiations with small and mid-size incumbent LECs. We do not adopt Cincinnati Bell's position because some new entrants, regardless of their size, that do not already have interconnection arrangements with incumbent LECs may face delays in initiating service solely because of the need to negotiate transport and termination arrangements with the incumbent LEC. We believe that the adoption of interim rates, subject to a "true-up," advances the pro-competitive goals of the statute. We also note that certain small incumbent LECs are not subject to our rules under section 251(f)(1) of the 1996 Act, unless otherwise determined by a state commission, and certain other small incumbent LECs may seek relief from their state commissions from our rules under section 251(f)(2) of the 1996 Act.

4. Symmetry

a. Background

1069. Symmetrical compensation arrangements are those in which the rate paid by an incumbent LEC to another telecommunications carrier for transport and termination of traffic originated by the incumbent LEC is the same as the rate the incumbent LEC charges to transport and terminate traffic originated by the other telecommunications carrier. Incumbent LECs are not likely to purchase interconnection or unbundled elements from competitive LECs, except for termination of traffic, and possibly transport.[2552] In the NPRM, we sought comment on whether

[2550] "[T]he Commission's establishment of an interim billing and collection arrangement was both a helpful and necessary step for the Commission to take in implementing its 'immediate' interconnection order." *Lincoln Telephone & Telegraph Co. v. FCC*, 659 F.2d 1092, 1107 (D.C.Cir.1981) (upholding Commission decision requiring an incumbent LEC to interconnect with MCI immediately, in order not to delay interconnection, at interim rates subject to later adjustment); *see also FTC Communications v. FCC*, 750 F.2d 226 (2d Cir.1984) (affirming Commission's authority under Section 4(i) to set interim rates for interconnection between the domestic record carrier, Western Union, and international record carriers, subject to an accounting order, pending the conclusion of a rulemaking to set permanent rates replacing expired, contract-based rates).

[2551] *LEC-CMRS Interconnection NPRM* at para. 60.

[2552] NPRM at para. 235.

rate symmetry requirements are consistent with the statutory requirement that rates set by states for transport and termination of traffic be based on "costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier," and "a reasonable approximation of the additional costs of terminating such calls."[2553]

1070. In addition, we noted in the NPRM that the Illinois, Maryland, and New York commissions have established different rates for termination of traffic on an incumbent LEC's network, depending upon whether the traffic is handed off at the incumbent LEC's end office or tandem switch.[2554] We also observed that California and Michigan have established one rate that applies to transport and termination of all competing local exchange carrier traffic on incumbent LEC networks, regardless of whether the traffic is handed off at the incumbent LEC's end office or tandem switch, although this rate does not currently apply to CMRS.[2555] We, therefore, address whether rates for transport and termination should be symmetrical and consist of only a single rate regardless of where the call is handed off, or if rates should be priced on an element-by-element basis.

1071. In the *LEC-CMRS Interconnection NPRM*, we sought comment on whether incumbent LECs were utilizing their greater bargaining power to negotiate with wireless carriers interconnection agreements that did not reflect principles of mutual compensation. We sought comment on whether we should institute some procedure or mechanism in addition to our section 208 enforcement process to ensure that incumbent LECs comply with our existing rules requiring mutual compensation.[2556]

b. Comments

1072. *Local Competition NPRM.* Incumbent LECs argue that a symmetrical reciprocal compensation requirement does not comport with the Act.[2557] GTE contends that the symmetry rule violates the requirement of section 252(d)(2) that rates be based on a reasonable estimate of the additional costs of transport and termination.[2558] In addition, Lincoln Telephone argues that rates for the transport and termination of traffic should not be symmetrical because small and

[2553] 47 U.S.C. § 252(d)(2).

[2554] NPRM at para. 239.

[2555] *Id.*

[2556] *LEC-CMRS Interconnection NPRM*, para. 81.

[2557] *See, e.g.*, BellSouth comments at 72-73; SBC comments at 51-52; GTE reply at 29.

[2558] GTE reply at 29.

mid-sized companies can incur higher costs transporting and terminating traffic than larger carriers.[2559] TDS argues that a symmetrical pricing standard fails to fulfill the basic statutory directive that each carrier recover its costs.[2560] BellSouth contends that, because the costs of an incumbent LEC and new entrant are likely to be quite different, the Commission does not have the authority to contravene the mutual and reciprocal recovery language of section 252(d)(2) and require symmetry.[2561] Furthermore, MECA, which represents Michigan exchange carriers, asserts that competing LECs should be required to compensate each other for terminating traffic at a cost-based rate for each carrier.[2562] MECA argues that compensation rates cannot be uniform because each carrier has its own unique cost structure.[2563] RTC also asserts that proposals such as symmetry do not consider the costs involved in the use of another's carriers network.[2564]

1073. On the other hand, state commissions, as well as several other commenters, support symmetrical reciprocal compensation mechanisms.[2565] Several commenters contend that symmetrical rates are mutual and reciprocal, and therefore only symmetrical rates can satisfy the statutory standards required under section 252(d)(2).[2566] MFS notes that Congress required that compensation rates be "mutual and reciprocal" and based on a "reasonable approximation of additional costs," and expressly prohibited any requirement of actual cost studies.[2567] According to MFS "these interrelated provisions indicate Congress's intention that optimal economic costs, rather than actual or historical costs, should be used in setting these rates."[2568] MFS also argues that, while actual costs may vary from one carrier to the next, the optimal economic cost of performing the transport and termination function is the same for all carriers operating within the

[2559] Lincoln Tel. reply at 11-12.

[2560] TDS comments at 23.

[2561] BellSouth comments at 72-73.

[2562] MECA comments at 67.

[2563] *Id.*; *see also* Lincoln Tel. reply at 11.

[2564] RTC comments at 23.

[2565] *See, e.g.*, Alabama Commission comments at 32; AT&T comments at 69; Louisiana Commission comments at 7-8; Mass. Commission comments at 13; MCI comments at 50.

[2566] MFS comments at 82-83; GST comments at 40-42; *see also* Texas Public Utility Counsel comments at 52-54 (arguing that symmetrical rates are consistent with the Act as long as rates are based on TSLRIC).

[2567] MFS comments at 82.

[2568] *Id.*

same geographic area.[2569] Therefore, it asserts that *"[o]nly* symmetrical rates are 'mutual and reciprocal,' and only such rates are consistent with the provisions of Sec. 252(d)(2)."[2570]

1074. Several potential new entrants believe that requiring symmetrical reciprocal compensation is needed to ensure efficient competition.[2571] MCI argues that the reciprocal compensation will be of much greater importance to competing carriers than to incumbent LECs because initially calls terminating on other carriers' networks will account for a far greater share of entrants' traffic than is the case for incumbent LECs, which will still be terminating most of their local traffic on their own networks.[2572] Therefore, MCI asserts that the compensation rate charged for transport and termination will comprise a significant portion of the competing carrier's overall cost of providing service.[2573] MCI argues that incumbent LECs have every reason to attempt to use their superior bargaining position in negotiations to obtain termination rates that are as high as possible, and asserts that a symmetrical compensation rate will reduce the incentive of incumbent LECs to inflate their termination rates.[2574] In addition, MFS asserts that asymmetrical rates burden new entrants because incumbent LECs have greater bargaining power and access to information.[2575] The Alabama Commission contends that equal rates eliminate incumbent LECs' ability to exploit the system.[2576]

1075. Some prospective local entrants contend that requiring symmetrical reciprocal compensation arrangements will lead to economically efficient outcomes.[2577] MFS contends that setting symmetrical rates based on the cost of optimal technology gives all carriers an incentive to use the most efficient network design in order to reduce costs.[2578] Further, GST argues that the long-term efficient cost of transporting and terminating traffic should be identical for all

[2569] *Id.*; *see also* Texas Public Utility Counsel comments at 52-54 (arguing that symmetrical rates based on TSLRIC should not vary much across companies).

[2570] MFS comments at 82 (emphasis in original); *see also* WinStar comments at 24-26; GST comments at 40-42.

[2571] *See, e.g.*, MCI comments at 50-51; MFS comments at 82-84.

[2572] MCI comments at 49-50.

[2573] *Id.*

[2574] *Id.*

[2575] MFS comments at 83.

[2576] Alabama Commission comments at 32.

[2577] *See, e.g.*, MFS comments at 83-84; WinStar comments at 26.

[2578] MFS comments at 84.

providers, based upon their adoption of the most efficient technology, even if their short-term costs based upon today's technology are different.[2579] WinStar argues that asymmetrical cost-based compensation would penalize new entrants for deploying state-of-the-art technology. According to WinStar, such a system would require new entrants to absorb the costs of the incumbent LECs' less efficient networks by paying higher termination rates, while entrants would be required to pass cost savings from their more efficient networks to the less efficient incumbent LECs by charging lower terminations rates.[2580] WinStar asserts that incumbent LECs have no incentive to increase the efficiency of their own operations as long as they remain free to recover the costs of terminating traffic through higher termination rates than those of their competitors.[2581]

1076. Many state commissions and potential new entrants contend that symmetrical rates should be based on the incumbent LEC's costs. AT&T argues that such an approach provides carriers with the proper incentives to minimize costs and has the added benefit of being administratively manageable, given that incumbent LECs will already be performing TSLRIC studies.[2582] In addition, the Massachusetts Commission notes that entrants may not have the expertise or ability to calculate costs for specific services, and supports use of the incumbent LECs' costs to calculate reciprocal compensation rates. The Alabama Commission asserts, however, that reciprocal compensation rates should be set equal to the transport and termination rates charged by entrants.[2583] Noting that some new entrants may have higher costs than incumbent LECs, several commenters argue that, while reciprocal compensation generally should be symmetrical based on incumbent LECs' costs, new entrants should be able to prove their costs are higher than the incumbent LECs' rates.[2584] Lincoln Telephone, on the other hand, opposes a symmetry requirement because it "achieves expediency at the expense of economic efficiency, thereby eliminating some of the benefits of competition under the Act."[2585]

1077. Several commenters, including many states, contend that this issue should be left to the states or parties to decide.[2586] The California Commission suggests that symmetry should be

[2579] GST comments at 35-38.

[2580] WinStar comments at 26.

[2581] *Id.*

[2582] AT&T comments at 69; *see also* Texas Public Utility Counsel comments at 52-54.

[2583] Alabama Commission comments at 32.

[2584] *See, e.g.*, Mass. Commission comments at 13; Sprint comments at 83.

[2585] Lincoln Tel. comments at 22.

[2586] *See, e.g.*, Ohio Commission comments at 73-75; Illinois Commission comments at 79-80; Pennsylvania Commission comments at 40; Ohio Consumers' Counsel reply at 24.

encouraged by the Commission but not mandated.[2587] NYNEX claims that, although the statute does not require symmetrical rates, parties may agree to such a scheme in a negotiated agreement.[2588]

1078. Certain commenters argue that any symmetry requirement should only apply to separate rate elements. The Ohio Commission supports symmetrical rates on a rate element-by-rate element basis (*e.g.*, local switching rate element, local transport rate element).[2589] For example, the Ohio Commission would not endorse symmetrical rates for transport and termination where a new entrant requests interconnection with an incumbent LEC's tandem office, and the new entrant does not have tandem capabilities.[2590] In that case, terminating a call on the new entrant's network typically would involve only the use of local switching and local transport between the interconnection point and the LEC's switch. In contrast, terminating a call on the incumbent LEC's network often is likely to involve the use of the incumbent LEC's tandem switch in addition to the local switch and the transport between the two switching offices.[2591] Bell Atlantic argues that the reciprocal compensation rate for calls delivered to an access tandem for which the terminating carrier will incur the cost of tandem switching and transport should be allowed to be higher than rates for calls delivered to an end office, which do not incur those additional costs.[2592]

1079. MFS opposes a two-tier termination rate structure under which one rate applies for traffic routed through an incumbent LEC's tandem switch, and a lower rate applies to traffic directly trunked to an incumbent LEC's end office. MFS asserts that these rate structures are inherently non-reciprocal because non-incumbent LECs typically do not operate separate tandem and end-office hierarchies.[2593] Time Warner argues that transport and termination based on incumbent LECs' historical choices of network architecture penalizes new LECs that deploy different architectures, even when that architecture is more efficient.[2594] TCI argues that higher charges for routing calls through tandem switches rather than directly through the incumbent LEC's end offices will discourage carriers from routing traffic through tandem switches, even

[2587] California Commission comments at 44.

[2588] NYNEX reply at 43-44.

[2589] Ohio Commission comments at 73-75

[2590] *Id.* at 73-74.

[2591] *Id.*

[2592] Bell Atlantic comments at 43.

[2593] MFS comments at 77-78; *see also* NCTA reply at 14-15.

[2594] Time Warner comments at 87-88; *see also* Continental comments at 13-14; Winstar comments at 26.

when it is efficient to do so.[2595]

1080. *LEC-CMRS Interconnection NPRM.* Many CMRS providers contend that they are unable to negotiate interconnection arrangements based on mutual or reciprocal compensation because of incumbent LEC bargaining power.[2596] In its reply comments, Omnipoint asserts that many interconnection agreements across the CMRS industry reflect a general incumbent LEC unwillingness to provide reciprocal compensation.[2597] SBC argues, however, that CMRS providers have significant bargaining power and numerous options for interconnection.[2598] Ameritech states that it continues to fulfill the principles of mutual compensation in all of its CMRS compensation arrangements.[2599]

1081. Although the incumbent LECs generally contend that good faith negotiations are working well,[2600] most CMRS providers comment that the negotiation process works poorly.[2601] According to AT&T, the problem of achieving mutual compensation is further compounded because incumbent LECs not only charge rates that bear no relationship to their costs but also refuse to compensate CMRS providers for termination of landline-originated calls.[2602] In many instances, incumbent LECs even charge CMRS providers for terminating incumbent LEC-originated calls.[2603] GTE, however, states that it does not charge CMRS providers for land-to-

[2595] TCI comments at 28.

[2596] *See, e.g.*, Nextel comments in CC Docket No. 95-185 at 5; Tracer reply in CC Docket No. 95-185 at 8; Vanguard comments in CC Docket No. 95-185 at 6; *see also* CTIA comments in CC Docket No. 95-185 at 8.

[2597] Omnipoint reply in CC Docket No. 95-185 at 3-7; *see also* RCC comments in CC Docket No. 95-185 at 5; 360 Degrees comments in CC Docket No. 95-185 at 3; Western Wireless comments in CC Docket No. 95-185 at 13.

[2598] SBC comments in CC Docket No. 95-185 at 13.

[2599] Ameritech comments in CC Docket No. 95-185 at 4.

[2600] *See, e.g.*, GTE comments in CC Docket No. 95-185 at 18; Ameritech comments in CC Docket No. 95-185 at 4.

[2601] *See, e.g.*, APC/Sprint Joint comments in CC Docket No. 95-185 at 11; PCIA reply in CC Docket No. 95-185 at 6-8; *see also* Cox comments in CC Docket No. 95-185 at 12-16; AT&T reply in CC Docket No. 95-185 at 4-8.

[2602] AT&T comments in CC Docket No. 95-185 at 8; *see also* Western Wireless comments in CC Docket No. 95-185 at 13; New Par comments in CC Docket No. 95-185 at 5.

[2603] *See, e.g.*, Arch comments in CC Docket No. 95-185 at 3; Centennial comments in CC Docket No. 95-185 at 9; Century comments in CC Docket No. 95-185 at 4; CMT comments in CC Docket No. 95-185 at 4; Nextel comments in CC Docket No. 95-185 at 5.

mobile traffic.[2604] California has rejected the principle of mutual compensation for interconnection, reasoning that such a policy would lead to a calling-party-pays system, which in turn could lead to an increase in the cost of basic telephone service.[2605] CMRS providers report that they receive mutual compensation from only a handful of the incumbent LECs with which they interconnect.[2606]

1082. CMRS providers generally agree that many interconnection arrangements result in unjust, unreasonable and discriminatory interconnection rates, terms and conditions.[2607] According to Cox, the average incremental cost of call termination, expressed on a per minute basis is .20 cents, but the average charge for cellular interconnection is currently 3 cents per minute.[2608] Similarly, Comcast states that the aggregate charge it pays Bell Atlantic for call termination is 2.5 cents per minute, or 12.5 times the average incremental cost of 0.2 cents.[2609] In contrast, the incumbent LECs assert that incumbent LEC interconnection rates have provided for reasonable charges.[2610] A few incumbent LECs also point to the lack of interconnection rate complaints filed in their respective regions as evidence of reasonable rates.[2611] Cox responds that "the fact that few complaints have been filed does not lead to the conclusion that existing agreements are reasonable, let alone that they promote competition."[2612] U S West contends that, until the local rate subsidy issue is addressed, reform in CMRS interconnection charges will not come to fruition.[2613]

[2604] GTE comments in CC Docket No. 95-185 at 19-20.

[2605] California Commission comments in CC Docket No. 95-185 at 6.

[2606] *See, e.g.*, Bell Atlantic/NYNEX Mobile comments in CC Docket No. 95-185 at 4-5.

[2607] *See, e.g.*, Comcast comments in CC Docket No. 95-185 at 4; Vanguard comments in CC Docket No. 95-185 at 7.

[2608] Cox comments in CC Docket No. 95-185 at 13.

[2609] Comcast comments in CC Docket No. 95-185 at 5-6.

[2610] *See, e.g.*, Pacific Bell reply in CC Docket No. 95-185 at 16-27; U S West comments in Docket 95-185 at 6-8.

[2611] *See, e.g.*, Bell Atlantic comments in CC Docket No. 95-185 at 9-11; NYNEX comments in CC Docket No. 95-185 at 13-15, 22-23; Ameritech comments in CC Docket No. 95-185 at 4; USTA comments in CC Docket No. 95-185 at 7.

[2612] Cox reply in CC Docket No. 95-185 at 6; *see also* New Par reply in CC Docket No. 95-185 at 7; PageNet reply CC Docket No. 95-185 at 5-7.

[2613] US West reply in CC Docket No. 95-185 at 5. US West alleges that access and local interconnection must be priced above cost to provide a subsidy to local residential services that remain priced below cost.

1083. The incumbent LECs further assert that, aside from anecdotal commentary, CMRS providers submit no evidence that their market entry or growth has been impeded by state or incumbent LEC action with respect to interconnection.[2614] The incumbent LECs argue that CMRS is developing rapidly under existing compensation arrangements and therefore current interconnection policies apparently do not pose a barrier to CMRS competition.[2615] U S West contends that CMRS providers have benefitted from negotiations that have resulted in declining interconnection charges as well as added flexibility with the introduction of calling-party-pays and wide area calling options.[2616] Many CMRS providers contend, however, that the industry may have grown faster had it not been impeded by unreasonable interconnection rates.[2617] Some incumbent LECs also point out that interconnection charges only represent a small percentage of a CMRS provider's total operating costs.[2618] But according to Airtouch, interconnection charges represent a growing proportion of CMRS costs.[2619]

1084. According to most paging companies, incumbent LEC abuses are especially acute for narrowband CMRS providers.[2620] Because virtually 100 percent of paging calls are originated on incumbent LEC networks and terminated on CMRS networks, incumbent LEC abuses, it is argued, present a formidable barrier to entry in the CMRS marketplace.[2621] Most paging carriers allege that incumbent LECs charge narrowband CMRS providers for terminating LEC-originated calls on the paging network but do not compensate narrowband CMRS providers for terminating incumbent LEC originated traffic.[2622] Many narrowband CMRS providers also allege discrimination because the charges assessed to paging companies for connection to the landline network are different from the charges assessed on other CMRS providers, and that many of these

[2614] *See, e.g.*, NYNEX reply in CC Docket No. 95-185 at 4; Pacific Bell reply in CC Docket No. 95-185 at 13-16.

[2615] *See, e.g.*, USTA reply in CC Docket No. 95-185 at 2-5.

[2616] US West comments in CC Docket No. 95-185 at 7-12.

[2617] *See, e.g.*, Vanguard reply in CC Docket No. 95-185 at 9; PageNet reply in CC Docket No. 95-185 at 7.

[2618] US West CC Docket No. 95-185 comments at 16; USTA reply in CC Docket No. 95-185 at 4-5. SBC estimates that interconnection charges represent 5.5 to 7 percent of a CMRS provider's total operating costs. SBC reply in CC Docket No. 95-185 at 18.

[2619] *See, e.g.*, Airtouch reply in CC Docket No. 95-185 at 10-13.

[2620] *See, e.g.*, Airtouch comments in CC Docket No. 95-185 at 59.

[2621] *See* Celpage comment in CC Docket No. 95-185 at 6.

[2622] *See e.g.*, Arch comments in CC Docket No. 95-185 at 6; Celpage comments in CC Docket No. 95-185 at 6.

interconnection charges are not substantiated with adequate cost data.[2623]

c. Discussion

(1) Symmetry In General

1085. Regardless of whether the incumbent LEC's transport and termination prices are set using a TELRIC-based economic cost study or a default proxy, we conclude that it is reasonable to adopt the incumbent LEC's transport and termination prices as a presumptive proxy for other telecommunications carriers' additional costs of transport and termination. Both the incumbent LEC and the interconnecting carriers usually will be providing service in the same geographic area, so the forward-looking economic costs should be similar in most cases. We also conclude that using the incumbent LEC's forward-looking costs for transport and termination of traffic as a proxy for the costs incurred by interconnecting carriers satisfies the requirement of section 252(d)(2) that costs be determined "on the basis of a reasonable approximation of the additional costs of terminating such calls." Using the incumbent LEC's cost studies as proxies for reciprocal compensation is consistent with section 252(d)(2)(B)(ii), which prohibits "establishing with particularity the additional costs of transporting or terminating calls."[2624] If both parties are incumbent LECs (*e.g.*, an independent LEC and an adjacent BOC), we conclude that the larger LEC's forward-looking costs should be used to establish the symmetrical rate for transport and termination. We conclude that larger LECs are generally in a better position to conduct a forward-looking economic cost study than smaller carriers.

1086. We conclude that imposing symmetrical rates based on the incumbent LEC's additional forward-looking costs will not substantially reduce carriers' incentives to minimize those costs. A symmetric compensation rule gives the competing carriers correct incentives to minimize its own costs of termination because its termination revenues do not vary directly with changes in its own costs. Moreover, symmetrical rates based on the incumbent LEC's costs should not seriously affect incumbent LECs' incentives to control costs. We expect that incumbent LECs will transport and terminate much more traffic that originates on their own networks than traffic that originates on competing carriers' networks. Even if, under the additional cost standard, incumbent LECs were required to reflect any improvements in operating efficiency, and consequent cost reductions, in reduced termination rates, the cost savings realized by the incumbent LEC are likely to be much greater than its reduction in net termination revenues, because the majority of traffic transported and terminated is likely to be its own. Even if a pass-through of incumbent LEC's cost reductions were instantaneous and complete, the number of minutes of use on which an incumbent LEC's net termination revenues is assessed is much smaller than its overall number of minutes of switching and transport. Moreover, if a

[2623] *See, e.g.*, Arch comments in CC Docket No. 95-185 at 23-25.

[2624] 47 U.S.C. §252(d)(2)(B)(ii).

portion of the reduction in costs is specific to exchange traffic, under symmetrical rates, the LEC's revenues from terminating traffic originating from another local carrier are based on the net difference in traffic, which is likely to be much smaller than the total traffic it terminates.[2625] For example, in the case where traffic is balanced, net termination charges are zero, a figure that is unaffected by changes in the incumbent LEC's costs, and the incumbent LEC is provided with correct incentives to minimize termination costs.

1087. We also find that symmetrical rates may reduce an incumbent LEC's ability to use its bargaining strength to negotiate excessively high termination charges that competitors would pay the incumbent LEC and excessively low termination rates that the incumbent LEC would pay interconnecting carriers. As discussed by commenters in the *LEC-CMRS Interconnection* proceeding, LECs have used their unequal bargaining position to impose asymmetrical rates for CMRS providers and, in some instances, have charged CMRS providers origination as well as termination charges.[2626] On the other hand, symmetrical rates largely eliminate such advantages because they require incumbent LECs, as well as competing carriers, to pay the same rate for reciprocal compensation.

1088. Symmetrical compensation rates are also administratively easier to derive and manage than asymmetrical rates based on the costs of each of the respective carriers. In addition, we believe that using the incumbent LEC's cost studies to establish the presumptive symmetrical rates will establish reasonable opportunities for local competition, including opportunities for small telecommunications companies entering the local exchange market.[2627] We have considered the economic impact of our rules in this section on small incumbent LECs. For example, RTC argues that symmetrical rates do not consider the costs involved in the use of another carrier's network. We find, however, that incumbent LECs' costs, including small incumbent LECs' costs, serve as reasonable proxies for other carriers' costs of transport and termination for the purpose of reciprocal compensation. We also note that certain small incumbent LECs are not subject to our rules under section 251(f)(1) of the 1996 Act, unless otherwise determined by a state

[2625] Consider a situation approximating traditional LEC-CMRS interconnection, in which traffic flows are substantially unbalanced: let us suppose, of 1,000,000 minutes of use, 750,000 are CMRS-to-LEC and 250,000 LEC-to-CMRS. Thus, under symmetric compensation at 0.3 cents per minute, the LEC receives 0.3 cents times 500,000, or $1,500.00. If it reduced its per-minute cost, for some reason only on terminating CMRS-to-LEC traffic, to 0.2 cents per minute, it would save 0.1 cent times 750,000, or $750.00, in reduced costs, whereas its terminating revenues would fall by only 0.1 cent times 500,000, or $500.00. Thus, it would still have substantial incentive to make the cost reduction in question. In situations closer to traffic balance, the incentive is even more favorable. And, of course, the LEC probably also reduces its cost of switching on many millions of other minutes that do not involve other networks at the same time.

[2626] *See, e.g.*, Century Comments in CC Docket No. 95-184 at 4; Western Wireless Comments in CC Docket No. 95-185 at 14.

[2627] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

commission, and certain other small incumbent LECs may seek relief from their state commissions from our rules under section 251(f)(2) of the 1996 Act. In addition, symmetry will avoid the need for small businesses to conduct forward-looking economic cost studies in order for the states to arbitrate reciprocal compensation disputes.[2628]

1089. Given the advantages of symmetrical rates, we direct states to establish presumptive symmetrical rates based on the incumbent LEC's costs for transport and termination of traffic when arbitrating disputes under section 252(d)(2) and in reviewing BOC statements of generally available terms and conditions. If a competing local service provider believes that its cost will be greater than that of the incumbent LEC for transport and termination, then it must submit a forward-looking economic cost study to rebut this presumptive symmetrical rate. In that case, we direct state commissions, when arbitrating interconnection arrangements, to depart from symmetrical rates only if they find that the costs of efficiently configured and operated systems are not symmetrical and justify a different compensation rate. In doing so, however, state commissions must give full and fair effect to the economic costing methodology we set forth in this order, and create a factual record, including the cost study, sufficient for purposes of review after notice and opportunity for the affected parties to participate. In the absence of such a cost study justifying a departure from the presumption of symmetrical compensation, reciprocal compensation for the transport and termination of traffic shall be based on the incumbent local exchange carrier's cost studies.

1090. We find that the "additional costs" incurred by a LEC when transporting and terminating a call that originated on a competing carrier's network are likely to vary depending on whether tandem switching is involved. We, therefore, conclude that states may establish transport and termination rates in the arbitration process that vary according to whether the traffic is routed through a tandem switch or directly to the end-office switch. In such event, states shall also consider whether new technologies (*e.g.*, fiber ring or wireless networks) perform functions similar to those performed by an incumbent LEC's tandem switch and thus, whether some or all calls terminating on the new entrant's network should be priced the same as the sum of transport and termination via the incumbent LEC's tandem switch. Where the interconnecting carrier's switch serves a geographic area comparable to that served by the incumbent LEC's tandem switch, the appropriate proxy for the interconnecting carrier's additional costs is the LEC tandem interconnection rate.

1091. We disagree with TCI's claim that higher charges for routing calls through tandem switches rather than directly through incumbent LECs' end offices will materially discourage carriers from routing traffic through tandem switches, even when it is efficient to do so. New entrants will only be encouraged to interconnect at end-office switches, rather than tandem switches, when the decrease in incumbent LEC transport charges justifies the extra costs incurred by the new entrant to route traffic directly through the incumbent LEC's end-office switches.

[2628] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

Carriers will interconnect in a way that minimizes their costs of interconnection, including the use of cost-based LEC network elements. In addition, the flexibility given to states may allow carriers, including small entities, with different network architectures to establish rates for terminating calls originating on other carriers' networks that are asymmetrical, if they can show that the costs of efficiently configured and operated systems are not symmetrical and justify different compensation rates, instead of being based on competitors' network architectures.[2629]

1092. We believe, with respect to interconnection between LECs and paging providers, that there should be an exception to our rule that states must establish presumptive symmetrical rates based on the incumbent LEC's costs for transport and termination of traffic. While paging providers, as telecommunications carriers, are entitled to mutual compensation for the transport and termination of local traffic, and should not be required to pay charges for traffic that originates on other carriers' networks, we believe that incumbent LECs' forward-looking costs may not be reasonable proxies for the costs of paging providers. Paging is typically a significantly different service than wireline or wireless voice service and uses different types and amounts of equipment and facilities. PageNet's own network, for example, is based on a regional hub and spoke network that transmits paging calls from radio transmitters to provide regional or national coverage.[2630] This configuration is distinctly different from either LEC wireline networks, with their hierarchy of switches and transmission facilities, or cellular carriers, with their multiple cells and sophisticated systems for handing off calls as a vehicle moves across cell boundaries. In addition, most calls terminated by paging companies are brief (averaging 15 seconds) in duration and contain no voice message, but only an alpha-numeric message of a few characters.[2631] Using incumbent LEC's costs for termination of traffic as a proxy for paging providers' costs, when the LECs' costs are likely higher than paging providers' cost, might create uneconomic incentives for paging providers to generate traffic simply in order to receive termination compensation. Thus, using LEC costs for termination of voice calls thus may not be a reasonable proxy for paging costs as the types of switching and transport that paging carriers perform are different from those of LECs and other voice carriers.

1093. Given the lack of information in the record concerning paging providers' costs to terminate local traffic, we have decided to initiate a further proceeding to try to determine what an appropriate proxy for paging costs would be and, if necessary, to set a specific paging default proxy. In the interim, however, in the event that LECs and paging companies cannot negotiate agreed-upon rates, we direct states, when arbitrating disputes under section 252(d)(2), to establish rates for the termination of traffic by paging providers based on the forward-looking economic

[2629] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

[2630] PageNet comments in CC Docket No. 95-185 at 34.

[2631] Letter from Carl W. Northrop, Paul, Hastings, Janofsy & Walker, on behalf of Arch Communications to Michele Farquhar, Chief, WTB, July 11, 1996.

costs of such termination to the paging provider. The paging provider seeking termination fees must prove to the state commission the costs of terminating local calls. Given the lack of information in the record concerning paging providers' costs, we further conclude that the default price for termination of traffic from the end office that we adopt in this proceeding in Section XI.A.3., *supra*, does not apply to termination of traffic by paging providers. This default price is based on estimates in the record of the costs to LECs of termination from the end office or end-office switching. There are no such estimates with respect to paging in the record, and as discussed above, we find that estimates of LEC costs may not reflect paging providers' costs.

(2) Existing Non-Reciprocal Agreements Between Incumbent LECs and CMRS Providers

1094. Section 20.11 of our rules, which predates enactment of the 1996 Act, requires that interconnection agreements between incumbent LECs and CMRS providers comply with principles of mutual compensation, and that each carrier pay reasonable compensation for transport and termination of the other carrier's calls.[2632] Based on the extensive record in the *LEC-CMRS Interconnection* proceeding, as well as that in this proceeding, we conclude that, in many cases, incumbent LECs appear to have imposed arrangements that provide little or no compensation for calls terminated on wireless networks, and in some cases imposed charges for traffic originated on CMRS providers' networks, both in violation of section 20.11 of our rules.[2633] Accordingly, we conclude that CMRS providers that are party to pre-existing agreements with incumbent LECs that provide for non-mutual compensation have the option to renegotiate these agreements with no termination liabilities or other contract penalties. Pending the successful completion of negotiations or arbitration, symmetrical reciprocal compensation provisions shall apply, with the transport and termination rate that the incumbent LEC charges the CMRS provider from the pre-existing agreement applying to both carriers, as of the effective date of the rules we adopt pursuant to this order.

1095. In addition, we conclude that this opportunity for CMRS providers currently operating under arrangements with non-mutual transport and termination rates to renegotiate such arrangements advances the mutual compensation regime contemplated under section 251(b)(5) of

[2632] 47 C.F.R. § 20.11.

[2633] *See, e.g.*, Centennial comments in Docket 95-185 at 8-9 (states that it does not receive compensation for terminating LEC-originated traffic in any of its 28 cellular markets, and is charged by the LEC to terminate LEC-originated calls in many of those markets); Century Cellunet comments in Docket 95-185 (states that it does not receive compensation from LECs to terminate landline originating calls, and that in some states, it must pay the LEC to terminate landline originating calls; further states that it is charged an average rate of $0.025 per minute for local interconnection); Point Communications comments in Docket 95-185 at 1 (Point has never received compensation for terminating landline originated calls); and Vanguard Cellular comments in Docket 95-185 at 7--8; 11 (notes that of the 95 LECs with which it interconnects, only one LEC in one community pays compensation for termination of LEC-originated calls).

the 1996 Act.[2634] We find that extending the opportunity to establish symmetrical reciprocal compensation for the transport and termination of traffic addresses inequalities in bargaining power that incumbent LECs may used to disadvantage interconnecting wireless carriers. At the same time, our rule will place wireless carriers with non-mutual, existing agreements on the same footing as other new entrants, who will be able to negotiate more equitable interconnection agreements because of the rules we put in place with this Report and Order. We find that we have ample authority under section 4(i) of the 1934 Act as well as section 251 of the 1996 Act, to order this remedy. Courts have held that "the Commission has the power to prescribe a change in contract rates when it finds them to be unlawful . . . and to modify other provisions of private contracts when necessary to serve the public interest."[2635] The opportunity that we are affording to CMRS providers in this context is consistent with similar "fresh look" requirements that we have adopted in the past.[2636]

5. Bill and Keep

a. Background

1096. *Local Competition NPRM.* In the NPRM, we defined bill-and-keep arrangements as those in which neither of two interconnecting networks charges the other network for terminating traffic that originated on the other network.[2637] Instead, each network recovers from its own end users the cost of both originating traffic delivered to the other network and terminating traffic received from the other network. A bill-and-keep approach for termination of traffic does not, however, preclude a positive flat-rated charge for transport of traffic between carriers' networks.

[2634] We use the term "reciprocal compensation" and "mutual compensation" synonymously to mean that compensation flows in both directions between interconnecting networks. *See LEC-CMRS Interconnection NPRM* at para. 27 n.31.

[2635] *Western Union Tel. Co. v. FCC*, 815 F.2d 1495, 1501 (D.C. Cir. 1987). The Commission has adopted similar "fresh look" requirements in the past.

[2636] *See, e.g., Expanded Interconnection with Local Telephone Company Facilities*, CC Docket Nos. 91-141 and 92-222, Report and Order and Notice of Proposed Rulemaking, 7 FCC Rcd 7369, 7463-7465 (1992), *recon.*, 8 FCC Rcd 7341, 7342-7359 (1993) (fresh look to enable customers to take advantage of new competitive opportunities under special access expanded interconnection), *vacated on other grounds and remanded for further proceedings sub nom. Bell Atlantic Tel. Cos. v. FCC*, 24 F.3d 1441 (1994); *Competition in the Interstate Interexchange Marketplace*, CC Docket No. 90-132, Memorandum Opinion and Order on Reconsideration, 7 FCC Rcd 2677, 2681-82 (1992) ("fresh look" in context of 800 bundling with interexchange offerings); *Amendment of the Commission's Rules Relative to Allocation of the 849-851/894-896 MHz Bands*, GEN Docket No. 88-96, Memorandum Opinion and Order on Reconsideration, 6 FCC Rcd 4582, 4583-84 (1991) ("fresh look" requirements imposed in context of air-ground radiotelephone service as condition of grant of Title III license).

[2637] NPRM at para. 239.

1097. We sought comment on what guidance we should give state commissions regarding the use of bill-and-keep arrangements in arbitrated interconnection arrangements.[2638] We sought comment on whether section 252(d)(2)(B)(ii) specifically authorizes states to impose bill-and-keep arrangements in the arbitration process, at least when certain conditions are met.[2639] We also sought comment on whether we should interpret the statute as placing any limits on the circumstances in which states may adopt bill-and-keep arrangements.[2640] We also asked for comment on the meaning of the statutory description of bill-and-keep arrangements as "arrangements that waive mutual recovery."[2641] In addition, we sought comment on whether there are any circumstances in which the statute requires states to establish bill-and-keep arrangements.[2642]

1098. *LEC-CMRS Interconnection NPRM.* In the *LEC-CMRS Interconnection NPRM*, we proposed bill and keep as an interim arrangement.[2643] We noted there that proponents have argued that bill-and-keep would be economically efficient if either of two conditions are met: (1) traffic flows between competing LECs are balanced; or (2) the per-unit cost of interconnection is *de minimis*. We, therefore, address whether interim bill-and-keep arrangements for LEC-CMRS traffic should be imposed.

b. Comments

1099. *Local Competition NPRM.* Numerous new entrants and state commissions contend that bill-and-keep arrangements are expressly authorized by the statute.[2644] Non-incumbent LECs argue that section 252(d)(2) makes clear that bill-and-keep satisfies the reciprocal compensation duties of section 251(b)(5). Therefore, pursuant to the Commission's broad authority to adopt implementing regulations via section 251(d)(1), and consistent with the interconnection pricing standards, they argue that the Commission has the authority to require a bill-and-keep reciprocal

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[2638] NPRM at para. 243.

[2639] *Id.*

[2640] *Id.*

[2641] *Id.* (*citing* 47 U.S.C. § 252(d)(2)(B)(i)).

[2642] *Id.*

[2643] *See LEC-CMRS Interconnection NPRM* at paras. 60-62.

[2644] *See, e.g.*, Continental comments at 11; GST comments at 34-35; California Commission comments at 45-46; Time Warner comments at 93, reply at 34-37; Omnipoint comments at 15; Hyperion comments at 20-21; WinStar reply at 12.

compensation mechanism.[2645] Continental and NCTA assert, contrary to some incumbent LEC arguments, that section 252(b)(2)(B)(i) does not limit bill-and-keep to situations in which incumbent LECs waive their right to some other form of compensation, but instead clarifies that regulators are not precluded from imposing or approving such waivers.[2646] Numerous state commissions contend that reciprocal compensation issues should be left to the states to decide, and that states have the authority to impose bill-and-keep arrangements.[2647] Many of these commenters further argue that, while states have the authority to require bill-and-keep arrangements, the Commission does not have the authority to mandate these arrangements.[2648]

1100. Incumbent LECs as well as certain other commenters contend that mandatory bill-and-keep requirements conflict with the 1996 Act.[2649] Numerous incumbent LECs also argue that bill-and-keep arrangements fail the "reasonable approximation of the additional costs" test of section 252(d)(2) because they would effectively price termination at zero.[2650] For example, RTC argues that bill and keep fails to adequately deal with each carrier's costs and should not be considered, even as an interim proposal.[2651] Cincinnati Bell contends that the statute merely authorizes bill-and-keep arrangements in voluntary negotiations and only parties to the negotiation can properly assess if such an arrangement would be appropriate.[2652] In response to Cincinnati Bell's argument, potential new entrants counter that the only reasonable interpretation of section 252(d)(2) is that regulators may impose bill and keep over the objection of an incumbent LEC.[2653] They assert that this is the only logical interpretation because section 252(d)(2) only applies to

[2645] *See, e.g.*, Time Warner comments at 93-94; ACSI comments at 21-26. *But see* Ohio Consumers' Counsel reply at 24 (contending that Time Warner's argument is circular).

[2646] Continental comments at 11 n.15; NCTA comments at 55; *cf.* Cox reply at 19.

[2647] *See, e.g.*, Louisiana Commission comments at 20; Illinois Commission comments at 80; District of Columbia Commission comments at 37-38; Florida Commission comments at 40; *see also* Ohio Consumers' Counsel reply at 24.

[2648] *See, e.g.*, Illinois Commission comments at 80; District of Columbia Commission comments at 38.

[2649] *See, e.g.*, Ameritech comments at 78-79; PacTel comments at 95; SBC comments at 51-52; GTE comments at 56-58; BellSouth comments at 73-74; Cincinnati Bell comments at 38-39; Frontier comments at 32; Washington Independent Tel. Ass'n comments at 4; TDS comments at 24; ALTS comments at 45.

[2650] *See, e.g.*, NYNEX comments at 88-90; Ameritech Comments at 78-79; Bell Atlantic comments at 41-42; PacTel comments at 95; USTA comments at 82-84; U S West comments at 70-71.

[2651] RTC comments at 23.

[2652] Cincinnati Bell comments at 38-39.

[2653] *See, e.g.*, Jones Intercable comments at 27; NCTA reply at 15; ALTS reply at 31 n.37; Comcast reply at 12-14.

arbitration cases. If parties reach an agreement to use bill-and-keep arrangements, this section would not apply.[2654]

1101. Proponents of bill-and-keep arrangements contend that these arrangements minimize the administrative costs associated with metering and billing that would be incurred under other compensation methods.[2655] In addition, because there currently may be no mechanism readily available to new entrants for measuring terminating traffic, states and new entrants argue that the cost of measurement and billing under a reciprocal compensation agreement is not known.[2656] TCG asserts that bill-and-keep arrangements would reduce small carriers burdens by eliminating billing and monitoring requirements and the potential for carrier disputes.[2657] MCI asserts that termination measurement and billing costs would represent a substantial portion of termination costs.[2658] It notes that in the state of Washington, US West estimated that measurement and billing costs would more than double its reported TSLRIC cost of switching for local terminations.[2659] Other benefits of a bill-and-keep arrangement presented by commenters include: (1) elimination of incentives to "game" the LEC-to-LEC relationship by soliciting (or avoiding) customers with high incoming or outgoing usage;[2660] (2) architectural and technological neutrality;[2661] (3) the reduction of economic barriers to entry because it does not require additional capital investment that other arrangements would necessitate;[2662] and (4) economic efficiency.[2663] USTA, however, asserts that alternative local service providers will have no economic incentives

[2654] *Id.*

[2655] *See, e.g.*, California commission at 45; DOJ comments at 34-35; Teleport comments at 77; Jones Intercable comments at 28-29; Mass. Attorney General comments at 19. *But see* Bell Atlantic reply at Exhibit 2, p.8 (Richard Epstein, a witness for Bell Atlantic, argues that bill-and-keep may lead to habitual overconsumption by the party terminating less traffic that will be significantly more costly than administrative cost savings).

[2656] *See, e.g.*, Colorado Commission comments at 59; AT&T comments at 69; Sprint comments at 86-87; ACSI comments at 22-23.

[2657] TCG comments at 80.

[2658] MCI comments at 48.

[2659] *Id.; see also* Teleport comments at 77.

[2660] *See, e.g.*, Jones Intercable comments at 27-28; GST comments at 34-35; MCI comments at 53.

[2661] *See* Mass. Attorney General comments at 19.

[2662] *See, e.g.*, Telecommunications Resellers Ass'n comments at 54.

[2663] *See, e.g.*, Jones Intercable comments at 28; ACSI comments at 21-26; Competitive Policy Institute reply at 15-17.

to use the lower cost facilities or service under bill-and-keep arrangements.[2664]

1102. Potential new entrants observe that bill-and-keep arrangements have traditionally been used by neighboring incumbent LECs for exchanging traffic. Thus, they argue, bill-and-keep arrangements represent a fair mechanism for the exchange of traffic between new entrants and incumbent LECs.[2665] In response to this argument, MECA counters that compensation arrangements should not be patterned after EAS interconnections between incumbent LECs because those EAS arrangements were not designed for the competitive environment.[2666]

1103. Numerous commenters address the issue of the likely balance of traffic between a new entrant and an incumbent LEC. New entrants argue that in most cases traffic between incumbent LECs and competing LECs will be relatively balanced over time[2667] and that additional costs to terminate traffic on already over-built incumbent LEC networks are close to zero.[2668] In addition, the Consumer Federation of America contends that once barriers to competition (*e.g.*, number portability) are removed there is no reason to believe that there will be substantial incentives to seek heavy outgoing-only customers.[2669] While acknowledging that bill-and-keep arrangements may be problematic if traffic levels exchanged are significantly different, other new entrants argue that critics have failed to produce any evidence of materially uneven traffic loadings.[2670] MECA, however, argues that a bill-and-keep reciprocal compensation mechanism is flawed because it is premised on the assumption that terminating traffic will be equal in both directions for competing LECs.[2671] MECA argues that this assumption is incorrect because new entrants will engage in niche marketing to get a toehold in a new service area, and therefore the size of each carrier's customer base will be different and the total number of originating minutes

[2664] USTA comments at Attachment (Affidavit of Jerry A. Hausman), p. 9-10; *see also* BellSouth comments at Attachment (Interconnection and Economic Efficiency), p. 8-10; Bell Atlantic reply at Attachment (Declaration of Richard A. Epstein) p. 8 (adopting bill and keep would invite new entrants, that are able to tailor their networks, to keep traffic perpetually out of balance, as, for example, by actively courting companies, such as telephone solicitors, that generate a huge volume of outgoing calls).

[2665] *See, e.g.*, Sprint/APC comments at 11-12; TCI comments at 27; Continental comments at 10.

[2666] MECA comments at 69.

[2667] Time Warner comments at 97-98; *see also* TCI comments at 35-37.

[2668] Time Warner comments at 98-99; *see also* Teleport comments at 81-83.

[2669] CFA/CU comments at 55.

[2670] *See, e.g.*, ACSI comments at 24; GST comments at 34-35.

[2671] MECA comments at 68-69.

will differ.[2672]

1104. Numerous new entrants and state commissions recommend that bill-and-keep arrangements be implemented on an interim basis[2673] and note that reciprocal compensation arrangements will not be practical until mechanisms are developed to measure the relevant traffic volumes.[2674] Ameritech, however, argues that parties advocating mandating bill-and-keep arrangements on an interim basis do not take into account that the period during which the new carriers first enter a local market will be the time during which traffic is most unbalanced between the new entrants and the incumbent LEC.[2675] BellSouth argues that characterizing bill and keep as an interim arrangement does not remedy the problems associated with bill and keep.[2676]

1105. Some commenters opposed to bill-and-keep arrangements also argue that mandating these arrangements violates the takings clause of the Fifth Amendment.[2677] Numerous incumbent LECs argue that mandating bill-and-keep arrangements requires a LEC to transport and terminate traffic of another LEC, constituting a physical intrusion into the LEC's property.[2678] BellSouth further asserts that bill and keep would lead to no compensation for use of incumbent LEC property and will therefore constitute an uncompensated taking in violation of the Constitution.[2679] AT&T responds that there is no basis for the argument that bill and keep would be a taking.[2680] AT&T asserts that these claims are speculative and rest on an erroneous premise that bill-and-

[2672] MECA comments at 68-69; *but see* GST comments at 34-35 (using compensation systems other than bill-and-keep would encourage new entrants to focus entry strategies on niches that exploit compensation levels).

[2673] *See, e.g.*, Alabama Commission comments at 32; GST comments at 34-35; AT&T comment at 69; Cox comments at 27-28, 38-39; Sprint comments at 87; Jones Intercable comments at 28-29; Mass. Attorney General comments at 14, 21; Telecommunication Resellers Ass'n comments at 54-55.

[2674] *See, e.g.*, AT&T comments at 69; Colorado Commission at 59.

[2675] Ameritech reply at 36.

[2676] BellSouth reply at 40.

[2677] *See, e.g.*, Bell Atlantic comments at 41-42; Cincinnati Bell comments at 39 n.71; USTA comments at 84; U S West comments at 70-71; GTE comments at 57-58; BellSouth comments at 74-75.

[2678] *See, e.g.*, BellSouth comments at 74-75; Bell Atlantic comments at 41.

[2679] BellSouth comments at 74-75.

[2680] AT&T reply at 36; *see also* ALTS reply at 31; Cox reply at 21-22; Comcast reply at 14; Teleport reply at 20-22.

keep would provide no (or inadequate) compensation.[2681] AT&T argues that, as Congress recognizes, bill and keep allows each carrier in-kind compensation in the form of access to the other carrier's network.[2682] Similarly, Ohio Consumers' Counsel argues that a bill-and-keep mechanism makes each company whole through its own rate design and structure. As such, Ohio Consumers' Counsel argues that allegations that bill and keep means that a competing carrier gets to use the incumbent LEC's network for free cannot withstand scrutiny.[2683] NCTA asserts that bill and keep is not "physical occupation" of the incumbent LEC property, and furthermore does not authorize an invasion of incumbent LEC property, any more than it authorizes incumbent LECs to invade a new entrant's property.[2684] In response to the confiscation argument, NCTA contends that rate regulation does not violate the takings clause unless it is so "unjust as to destroy the value of the property for all purposes for which it was acquired."[2685]

1106. Some wireless commenters argue that bill-and-keep arrangements are not appropriate for incumbent LEC-narrowband CMRS or incumbent LEC-paging reciprocal compensation.[2686] ProNet argues that, because paging carriers' incremental termination costs are above zero and there is no evidence that paging demand is inelastic, imposing bill and keep would likely result in serious resource misallocation.[2687] In addition, PageNet argues that, with respect to paging, the cost of termination is not small and in fact comprises a significant portion of the total revenue requirement for paging services.[2688] With respect to rural incumbent LECs, Bay Spring argues that states should be prohibited from adopting bill-and-keep arrangements to the extent that they force rural incumbent LECs to terminate other carriers' calls on their rural networks without compensation.[2689]

[2681] *Id.*

[2682] AT&T reply at 36; *see also* Washington Commission comments at 3, 38; Teleport comments at 68.

[2683] Ohio Consumers' Counsel comments at 44.

[2684] NCTA reply at 16; *see also* Cox reply at 21-22.

[2685] *Id.* at 17 (*citing Duquesne Light Co. v. Barasch*, 109 S.Ct. 609, 615 (1989), and *Covington & Lexington Turnpike Road Co. v. Sandford*, 164 U.S. 578, 579 (1896)).

[2686] *See, e.g.*, ProNet comments at 11; PageNet comments at 11.

[2687] ProNet comment at 11-12.

[2688] PageNet comments at 11.

[2689] Bay Springs, et. al comments at 17; *see also* GVNW comments at 41; Bay Springs et. al reply at 11-12 (incremental termination costs are higher for small LECs because the smaller size of their networks reduce economies of scale).

1107. *LEC-CMRS Interconnection NPRM.* CMRS providers, with the exception of paging providers, generally support the Commission's proposal to adopt an interim bill-and-keep compensation mechanism.[2690] Some supporters of an interim bill-and-keep compensation model argue that it should be adopted on a permanent basis,[2691] and others argue that it should be extended to transport charges.[2692] PageNet and other paging providers oppose application of a bill-and-keep compensation mechanism to the paging industry because traffic flows are entirely one-way.[2693] Sprint supports application of an interim bill-and-keep model solely for incumbent LEC-PCS interconnection.[2694]

1108. Most CMRS providers contend that bill and keep is an appropriate interim compensation mechanism because the incremental cost of incumbent LEC-CMRS interconnection is so low that there is little difference between a cost-based and zero rate.[2695] Cox and other commenters cite the Brock study's conclusions that the national average incremental cost of incumbent LEC-CMRS interconnection is 0.2 cents per minute and that the off-peak cost is close to zero as support for adoption of an interim bill-and-keep model.[2696] Cox contends that none of the incumbent LECs has submitted evidence that the average incremental cost of call termination is anything other than 0.2 cents per minute.[2697] In addition, APC notes that it has relatively balanced traffic flows with incumbent LECs[2698] and a number of CMRS providers assert that incumbent LEC-cellular traffic flows will become more balanced in the future.[2699] AT&T states

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[2690] *See, e.g.*, AirTouch comments in CC Docket No. 95-185 at 20; CTIA comments in CC Docket No. 95-185 at 7; Comcast comments in CC Docket No. 95-185 at 9.

[2691] *See, e.g.*, New Par comments in CC Docket No. 95-185 at 10; NC 4 Cellular comments in CC Docket No. 95-185 at 1.

[2692] *See, e.g.*, MCI comments in CC Docket No. 95-185 at 5; Nextel comments in CC Docket No. 95-185 at 9; Omnipoint comments in Docket No. 95-185 at 8.

[2693] PageNet comments in CC Docket No. 95-185 at 23; *see also, e.g.*, Allied comments in CC Docket No. 95-185 at 8; Arch comments in CC Docket No. 95-185 at 11.

[2694] Sprint comments in CC Docket No. 95-185 at 7.

[2695] *See, e.g.*, Cox comments in CC Docket No. 95-185 at 29-30.

[2696] Cox comments in CC Docket No. 95-185 at 23; *see also* New Par comments in CC Docket No. 95-185 at 12.

[2697] Cox reply in CC Docket No. 95-185 at 41-42; *see also* Comcast reply in CC Docket No. 95-185 at 17-22.

[2698] APC comments in CC Docket No. 95-185 at 9.

[2699] *See, e.g.*, PCIA comments in CC Docket No. 95-185 at 8; Time Warner comments in CC Docket No. 95-185 at 21.

that any traffic imbalances are offset by the higher cost to CMRS providers of terminating incumbent LEC-originated calls.[2700] Similarly, CTIA asserts that the relevant inquiry is whether the costs each carrier incurs to terminate traffic are balanced, not whether total traffic is balanced.[2701] Some commenters argue that bill and keep is necessary to curb incumbent LEC market power and to remedy incumbent LECs' failure to provide mutual compensation.[2702]

1109. Incumbent LEC commenters, however, generally oppose the Commission's proposal to adopt an interim bill-and-keep compensation mechanism.[2703] A number of incumbent LECs contend that neither of the two conditions that justify a bill-and-keep compensation mechanism -- balanced traffic flows or interconnection costs near zero -- are present in the context of incumbent LEC-CMRS interconnection.[2704] SBC states that bill-and-keep is inappropriate where 80 percent of traffic is CMRS-to-incumbent LEC.[2705] USTA asserts that CMRS interconnection causes incumbent LECs to incur costs for which they should be compensated, and estimates that those costs are 1.3 cents ($0.013) per minute.[2706] Other incumbent LECs contend that the Brock study underestimates the costs of incumbent LEC-CMRS interconnection, but provide no cost estimates of their own.[2707] In addition, many opponents of bill-and-keep contend that it will create market distortions and encourage arbitrage.[2708] Some incumbent LEC commenters assert that incumbent LECs will be unable to recover from ratepayers the lost revenues from LEC-CMRS interconnection charges,[2709] and that bill and keep

[2700] AT&T comments in CC Docket No. 95-185 at 10.

[2701] CTIA reply in CC Docket No. 95-185 at 12-14.

[2702] *See, e.g.*, CTIA comments in CC Docket No. 95-185 at 9; Telecommunications Resellers Ass'n comments in CC Docket No. 95-185 at 8.

[2703] *See, e.g.*, Bell Atlantic comments in CC Docket No. 95-185 at 6; BellSouth comments in CC Docket No. 95-185 at 20; NTCA comments in CC Docket No. 95-185 at 8. *But see* Teleport comments in CC Docket No. 95-185 at 2.

[2704] *See, e.g.*, Ameritech comments in CC Docket No. 95-185 at 8-9, Cincinnati Bell comments in CC Docket No. 95-185 at 4-5.

[2705] SBC comments in CC Docket No. 95-185 at 12.

[2706] USTA comments in CC Docket No. 95-185 at 24, Attachment (Bill and Keep: A Bad Solution to a Non-Problem), p. 8.

[2707] *See, e.g.*, BellSouth comments in CC Docket No. 95-185 at 24.

[2708] *See, e.g.*, Pacific Bell comments in CC Docket No. 95-185 at 11, 60.

[2709] *See, e.g.*, BellSouth comments in CC Docket No. 95-185 at 28; NYNEX comments in CC Docket No. 95-185 at 34; U S West comments in CC Docket No. 95-185 at 25.

is an unlawful taking.[2710] U S West disputes the Commission's contention that bill-and-keep is administratively efficient because, it argues, carriers will still have to develop billing and accounting systems.[2711]

1110. Several commenters propose alternatives to the Commission's proposed bill-and-keep interim compensation mechanism. For example, Frontier suggests that the Commission adopt a benchmark compensation scheme similar to that offered by Ameritech in Illinois, which sets a rate of .5 cents ($0.005) per minute for end office termination and .75 cents ($0.0075) per minute for tandem termination.[2712] CMS recommends that bill and keep apply for a two year voluntary period, after which a mandatory negotiation period under bill and keep would be imposed if the parties fail to reach agreement.[2713] RCC proposes that bill and keep be used only until a "carrier access billing system" can be implemented.[2714]

c. Discussion

1111. As an additional option for reciprocal compensation arrangements for termination services, we conclude that state commissions may impose bill-and-keep arrangements if neither carrier has rebutted the presumption of symmetrical rates and if the volume of terminating traffic that originates on one network and terminates on another network is approximately equal to the volume of terminating traffic flowing in the opposite direction, and is expected to remain so, as defined below. We disagree with commenters who contend that the Commission and states do not have the authority to mandate bill-and-keep arrangements under any circumstances. Section 252(d)(2)(B)(i) provides that the definition of what may be considered "just and reasonable" terms and conditions for reciprocal compensation "shall not be construed to preclude arrangements that afford mutual recovery (such as bill-and-keep arrangements)."[2715] We conclude that section 252(d)(2) would be superfluous if bill-and-keep arrangements were limited to negotiated agreements, because none of the standards in section 252(d) apply to voluntarily-negotiated agreements. Therefore, it is clear that bill-and-keep arrangements may be imposed in the context of the arbitration process for termination of traffic, at least in some circumstances.

[2710] *See, e.g.*, Bell Atlantic comments in CC Docket No. 95-185 at 8; BellSouth comments in CC Docket No. 95-185 at 20; Pacific Bell comments in CC Docket No. 95-185 at 79; U S West comments in CC Docket No. 95-185 at 49.

[2711] U S West comments in CC Docket No. 95-185 at 39-40.

[2712] Frontier comments in CC Docket No. 95-185 at 9.

[2713] CMS comments in CC Docket No. 95-185 at 17.

[2714] RCC comments in CC Docket No. 95-185 at 8-9.

[2715] 47 U.S.C. § 252(d)(2)(B)(i).

1112. Section 252(d)(2)(A)(i) provides that to be just and reasonable, reciprocal compensation must "provide for the mutual and reciprocal recovery by each carrier of costs associated with transport and termination."[2716] In general, we find that carriers incur costs in terminating traffic that are not *de minimis*, and consequently, bill-and-keep arrangements that lack any provisions for compensation do not provide for recovery of costs. In addition, as long as the cost of terminating traffic is positive, bill-and-keep arrangements are not economically efficient because they distort carriers' incentives, encouraging them to overuse competing carriers' termination facilities by seeking customers that primarily originate traffic. On the other hand, when states impose symmetrical rates for the termination of traffic,[2717] payments from one carrier to the other can be expected to be offset by payments in the opposite direction when traffic from one network to the other is approximately balanced with the traffic flowing in the opposite direction. In such circumstances, bill-and-keep arrangements may minimize administrative burdens and transaction costs. We find that, in certain circumstances, the advantages of bill-and-keep arrangements outweigh the disadvantages, but no party has convincingly explained why, in such circumstances, parties themselves would not agree to bill-and-keep arrangements. We are mindful, however, that negotiations may fail for a variety of reasons. We conclude, therefore, that states may impose bill-and-keep arrangements if traffic is roughly balanced in the two directions and neither carrier has rebutted the presumption of symmetrical rates.

1113. We further conclude that states may adopt specific thresholds for determining when traffic is roughly balanced. If state commissions impose bill-and-keep arrangements, those arrangements must either include provisions that impose compensation obligations if traffic becomes significantly out of balance or permit any party to request that the state commission impose such compensation obligations based on a showing that the traffic flows are inconsistent with the threshold adopted by the state.[2718] States may, however, also apply a general presumption that traffic between carriers is balanced and is likely to remain so. In that case, a party asserting imbalanced traffic arrangements must prove to the state commission that such imbalance exists. Under such a presumption, bill-and-keep arrangements would be justified unless a carrier seeking to rebut this presumption satisfies its burden of proof. We also find that states that have adopted bill-and-keep arrangements prior to the date that this order becomes effective, either in arbitration or rulemaking proceedings, may retain such arrangements, unless a party proves to the state commission that traffic is not roughly balanced. In that case, the state commission is to determine the termination rates based either on the forward-looking economic cost-based methodology or consistent with the default proxies in this order. Finally, we observe

[2716] 47 U.S.C.§ 252(d)(2)(A)(i).

[2717] *See infra*, Section XI.A.4.c. for a discussion of symmetrical rates.

[2718] For example, the Michigan Commission adopted a five percent threshold for the difference between the traffic flows in the two directions. Michigan Commission comments at Attachment 1 (Michigan Public Service Commission Case No. U-10647), p.29.

that carriers have an incentive to agree to bill-and-keep arrangements if it is economically efficient to do so, and that nothing in the Act prevents parties from agreeing to bill-and-keep arrangements even if a state declines to mandate such arrangements. For example, we note that Time Warner/BellSouth interconnection agreement provides for a bill-and-keep arrangement based on a "roughly balanced traffic" concept.[2719]

1114. In determining whether traffic is balanced, we find that precise traffic measurement is not necessary. It is sufficient to use approximations based on samples and studies comparable to reports on percentages of interstate use often used for access charge billing. Such an approach is likely to reduce implementation costs and complexities. Alternatively, state commissions may require that traffic flowing in the two directions be measured as accurately as possible during some defined period of time, which may commence no later than six months after an interconnection arrangement goes into effect. All affected carriers are required to cooperate with the state commission in implementing this measurement. A state commission that adopts a traffic flow measurement approach may adopt a "true-up" mechanism to ensure that no carrier is disadvantaged by an interim rate that differs from the rate established once such a measurement is undertaken. Finally, state commissions may require that local traffic and access traffic be carried on separate trunk groups if they deem such measures to be necessary to ensure accurate measurement and billing.

1115. We have considered the economic impact of our rules in this section on small incumbent LECs. For example, RTC argues that bill-and-keep arrangements fail to adequately deal with each carrier's costs.[2720] In addition to basing reciprocal compensation on the incumbent LECs costs, we believe that by allowing carriers to rebut a presumption of balanced traffic volumes, the concern that bill-and-keep arrangements fail to adequately deal with each carrier's costs are addressed. We also note that certain small incumbent LECs are not subject to our rules under section 251(f)(1) of the 1996 Act, unless otherwise determined by a state commission, and certain other small incumbent LECs may seek relief from their state commissions from our rules under section 251(f)(2) of the 1996 Act.

1116. We disagree with commenters that argue that mandating bill-and-keep arrangements

[2719] Letter from W.W. Jordan, Executive Director, BellSouth, to William F. Caton, Acting Secretary, FCC, July 11, 1996. Per the agreement, no party shall owe compensation to the other unless the net minutes of use for terminating local traffic results in a dollar amount in excess of the amount designated for each month during the calculation period as follows: (1) during the first six month period of operation, no charges shall accrue, or compensation paid for the termination of local traffic, however, parties shall exchange billing information and usage data during this initial period for the purpose of reviewing for accuracy only; (2) during the second six months, $40,000 per month/billing period; (3) during the third six months, $30,000 per month/billing period; (4) during the fourth six months, $20,000 per month/billing period; and (5) during any extension of this agreement pursuant to Article II, paragraph 2.03, $0 per month/billing period.

[2720] RTC comments at 23.

in these circumstances violates the taking clause of Fifth Amendment. We reject BellSouth's argument that mandating bill-and-keep mechanisms would constitute a physical intrusion of LEC property. As NCTA observes, bill-and-keep arrangements are not a "physical occupation" of incumbent LEC property and thus *per se* takings cases[2721] are irrelevant. We also reject arguments that the bill-and-keep arrangements we adopt here would not adequately compensate incumbent LECs for transport and termination. As Congress recognized, bill-and-keep arrangements allow each carrier compensation "in-kind" in the form of access to the other carrier's network.[2722] Therefore, the type of bill-and-keep arrangements that we have permitted states to adopt are not unconstitutionally confiscatory.

1117. Commenters in the *LEC-CMRS Interconnection NPRM* assert that the estimated per minute cost of LEC termination ranges from 0.2 to 1.3 cents, and most of the estimates are clustered near the lower end of this range.[2723] These estimates are based primarily on interconnection at a LEC end office,[2724] while most interconnections occur at tandem offices where LECs' costs of call completion are higher than terminations routed directly through the end office switch.[2725] Moreover, the record contains no estimates of the cost of CMRS termination. That cost is generally considered to be greater than the cost of LEC termination;[2726] but only one oral, *ex parte* estimate of CMRS cost has been offered: 2.25 to 4.0 cents per minute.[2727] Further, there is no showing that the transaction costs of measuring traffic flows and making net payments would be so high that a bill-and-keep regime would be more efficient. Moreover, no party has demonstrated that aggregate cost flows between interconnecting LECs and CMRS providers are in balance.

[2721] *See Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 426 (1982); *Lucas v. South Carolina Coastal Council*, 112 S.Ct. 2886, 2893 (1992).

[2722] Joint Explanatory Statement at 120.

[2723] For the .2 cents per minute estimate, see letter from Robert F. Roche, CTIA, to William F. Caton, Acting Secretary, Federal Communications Commission, filed in CC Docket No. 94-54, Gerald W. Brock, *The Economics of Interconnection: Incremental Cost of Local Usage* (April 1995). For the 1.3 cents per minute estimate, *see* USTA Comments, CC Docket No. 95-185, submission of Jeffrey H. Rohlfs, Harry M. Shooshan III, and Calvin S. Monson, at 9-10.

[2724] *See supra*, Section VII.C.2.b.(2), for a complete discussion of cost estimates for terminations at both the end office and tandem office switches.

[2725] U S West comments in CC Docket No. 95-185 Attachment A (In Response to Dr. Gerald Brock by Professor Robert G. Harris), p. 11-14.

[2726] *See, e.g.*, AT&T comments in CC Docket No. 95-185 at Attachment (Declaration of Bruce M. Owen), p. 5-6.

[2727] Steven R. Brenner and Bridger M. Mitchell, CTIA *ex parte* briefing, CC Docket No. 95-185, Mar. 21, 1996.

1118. In light of the overall transport and termination policy we are adopting, we do not adopt the interim bill and keep arrangement tentatively proposed in the LEC-CMRS Interconnection NPRM. Notwithstanding our conclusions about bill and keep above, under which states may rule on bill and keep for particular pairs of firms based on the circumstances prevailing between them, we conclude that we are correct in not adopting bill and keep as a single, nationwide policy that would govern all LEC-CMRS transport and termination of traffic. Thus, we reject our tentative conclusion in the LEC-CMRS Interconnection NPRM. We expect, however, that when it is economically efficient to do so, parties will adopt bill and keep arrangements in the negotiation process. Also, as described above, a state commission may impose bill-and-keep arrangements with respect to CMRS-LEC traffic when it finds that traffic is roughly balanced and is expected to remain so.

B. ACCESS TO RIGHTS OF WAY

1. Overview

1119. Section 251(b)(4) imposes upon each LEC the "duty to afford access to the poles, ducts, conduits, and rights-of-way of such carrier to competing providers of telecommunications services on rates, terms, and conditions that are consistent with section 224."[2728] The access provisions of section 224, as amended by the 1996 Act, differ from the requirements of section 251(b)(4) with respect to both the entities required to grant access and the entities that may demand access. Section 224(f)(1) imposes upon all utilities,[2729] including LECs, the duty to "provide a cable television system or any telecommunications carrier with nondiscriminatory access to any pole, duct, conduit, or right-of-way owned or controlled by it."[2730] For purposes of section 224, the term "telecommunications carrier" excludes any incumbent LEC as that term is defined in section 251(h).[2731]

1120. In the NPRM, we sought comment on various aspects of this access requirement, as well as on section 224(f)(2) which creates the following limited exception to the obligations of section 224(f)(1):

> Notwithstanding paragraph (1), a utility providing electric service may deny a cable

[2728] 47 U.S.C. § 251(b)(4).

[2729] A "utility" is "any person who is a local exchange carrier or an electric, gas, water, steam, or other public utility, and who owns or controls poles, ducts, conduits, or rights-of-ways used, in whole or in part, for wire communications," but does not include any railroad, any cooperative, or any federally or state-owned entities. 47 U.S.C. § 224(a)(1).

[2730] 47 U.S.C. § 224(f)(1). *See* 47 U.S.C. § 153(44) (definition of "telecommunications carrier").

[2731] 47 U.S.C. § 224(a)(5).

television system or any telecommunications carrier access to its poles, ducts, conduits, or rights-of-way, on a non-discriminatory basis where there is insufficient capacity and for reasons of safety, reliability and generally applicable engineering purposes.[2732]

1121. Additionally, we sought comment on section 224(h), which provides:

> Whenever the owner of a pole, duct, conduit, or right-of-way intends to modify or alter such pole, duct, conduit, or right-of-way, the owner shall provide written notification of such action to any entity that has obtained an attachment to such conduit or right-of-way so that such entity may have a reasonable opportunity to add to or modify its existing attachment. Any entity that adds to or modifies its existing attachment after receiving such notification shall bear a proportionate share of the costs incurred by the owner in making such pole, duct, conduit, or right-of-way accessible.[2733]

1122. In this Order, we establish rules implementing these provisions. Based on the comments received and the plain language of the statute, and in furtherance of our original mandate to institute an expeditious procedure for determining just and reasonable pole attachment rates with a minimum of administrative costs and consistent with fair and efficient regulation,[2734] we adopt herein a program for nondiscriminatory access to poles, ducts, conduits and rights-of-way. This Order includes several specific rules as well as a number of more general guidelines that are designed to give parties flexibility to reach agreements on access to utility-controlled poles, ducts, conduits, and rights-of-way, without the need for regulatory intervention. We provide for expedited dispute resolution when good faith negotiations fail, and we establish requirements concerning modifications to pole attachments and the allocation of the cost of such modifications. We also explain the division of responsibility between federal and state regulation envisioned by the 1996 Act.

2. Section 224(f): Non-discriminatory access

a. Background

1123. Pursuant to section 224(f)(1), a utility must grant telecommunications carriers and cable operators nondiscriminatory access to all poles, ducts, conduits, and rights-of-way owned or

[2732] 47 U.S.C. § 224(f)(2).

[2733] 47 U.S.C. § 224(h).

[2734] S. Rep. No. 580, 95th Cong., 1st Sess. 19 (1977).

controlled by the utility.[2735] This directive seeks to ensure that no party can use its control of the enumerated facilities and property to impede, inadvertently or otherwise, the installation and maintenance of telecommunications and cable equipment by those seeking to compete in those fields. Section 224(f)(1) appears to mandate access every time a telecommunications carrier or cable operator seeks access to the utility facilities or property identified in that section, with a limited exception allowing electric utilities to deny access "where there is insufficient capacity and for reasons of safety, reliability and generally applicable engineering purposes."[2736] While Congress recognized the legitimate interests of utilities in protecting and promoting the safety and reliability of their core services, on balance we believe section 224(f) reflects Congress' determination that utilities generally must accommodate requests for access by telecommunications carriers and cable operators.

b. Comments

1124. The comments relating to nondiscriminatory access describe in substantial detail a wide variety of largely technical issues and concerns. We will review the finer points raised by commenters in subsequent discussion sections devoted to particular issues. Here, we discuss the comments to the extent they provide an overview of access issues and we summarize the positions of the parties generally.

1125. NEES states that, historically, providers of electric and telephone services have installed and maintained transmission and distribution lines overhead and underground.[2737] According to NEES, the methods by which utilities install and maintain facilities vary depending upon a number of factors, including the type of utility service provided, the specific type of equipment being used, and various local conditions and regulations. Utilities state that their facilities often occupy public rights-of-way with other utilities or are constructed on private property pursuant to easements granted by the property owners.[2738] Utilities often are empowered to take property by eminent domain in order to install facilities and provide service.[2739] Because

[2735] As noted, a utility's obligations under section 224(f)(1), however, do not extend to incumbent LECs which are excluded from the definition of "telecommunications carriers" under section 224(a)(5). *See infra*, Section E(3)(c) for a discussion of the incorporation of this provision into section 251(b)(4).

[2736] 47 U.S.C. § 224(f)(2).

[2737] Facilities used to transport electricity generally can be divided into transmission facilities and distribution facilities. Transmission facilities deliver bulk power at high voltages across long distances for the ultimate use of a large number of customers. Distribution facilities deliver electricity at lower voltages to individual subscribers within a community. Electric transmission and distribution lines can be installed either on overhead poles and towers, or within underground ducts and conduit. NEES comments at 3.

[2738] PECO comments at 2-3; NEES comments at 4.

[2739] PECO comments at 2-3; Duquesne comments at 14-15.

of economic factors and space considerations, new entrants in the utility fields, as well as providers of cable television and other services, generally must "piggyback" on the poles and conduits of the incumbent utilities in order to provide service.[2740]

1126. The relationship between the general access requirement of section 224(f)(1) and the limited exception contained in section 224(f)(2) reflects long-standing, and sometimes contentious, relationships between utilities and various service providers seeking access to those facilities.[2741] Historically, access to utility poles, conduits, and other facilities has been governed by private pole attachment agreements entered into between the parties in accordance with a patchwork of federal, state, and local regulations and industry standards.[2742] Commenters extensively debate the extent to which our rules implementing section 224(f)(1) and (f)(2) should incorporate various aspects of these standards and requirements. Many utilities claim that existing regulations and standards, including those imposed unilaterally by individual utility companies, should continue to be observed.

1127. Generally, utilities argue that the nondiscrimination obligations set forth in the Act should not be triggered when a utility's facility has not previously been used by cable or telecommunications service providers.[2743] Requiring access accommodation, it is argued, may constitute a taking under the Fifth Amendment takings clause because the right to exclude others from the facility is an inherent attribute of property ownership that would be compromised by mandated access provisions.[2744] Alternatively, some parties suggest that, if access is allowed, utilities should have substantial discretion to set the terms and conditions of such access depending on the nature of the service involved because different technologies present varying levels of risk.[2745] Utilities contend that a wide variety of issues arise in the pole attachment context and that national rules governing questions of access would fail to accommodate the range of concerns that could justify a denial of access.[2746] For this reason, they request that the Commission eschew national rules in favor of individual case adjudication when a cable operator

[2740] *See* Cole comments at 1-3 & n. 1-5.

[2741] *See* Cole comments at 1-7; GST comments at 4.

[2742] American Electric comments at 26; Delmarva reply at 7.

[2743] UTC comments at 6-7.

[2744] American Electric Power comments at 7-10. We discuss these comments in more detail in a separate section devoted to constitutional issues. *See infra*, Section C.

[2745] ConEd comments at 12.

[2746] Carolina Power & Light comments at 4; Virginia Electric comments at 13; American Electric comments at 32-38.

or telecommunications carrier is denied access to a utility's pole or other facility.[2747] Electric utilities, in their comments, request that distinctions be made between facilities used for electric power and those used for other services, including telecommunications services.

1128. On the issue of capacity constraints, utilities strongly favor explicit provisions that would allow utilities to reserve capacity sufficient to meet future needs.[2748] They suggest space reservations are critical to enable utilities to meet expansion plans and ensure the fulfillment of existing obligations. For example, reserve space may be needed for the emergency replacement of failed components.[2749] Although capacity can sometimes be expanded, utilities argue for authority to deny access when providing access would require the expansion of existing capacity.[2750] If Congress intended utilities to expand existing capacity to accommodate new service providers, they argue, it would have granted utilities the power of eminent domain for this purpose.[2751]

1129. Utility commenters present various approaches to determining the amount of reserved capacity that should be recognized under the Commission's rules. Some oppose precise quantifiable reservations, advocating instead a case-by-case adjudication of the allowed reservation with deference to a utility's prior practices.[2752] At least one commenter, however, supports quantifiable limits as a safe harbor for access denials and suggests that a utility be permitted to reserve of 25% of remaining pole space.[2753]

1130. As for safety and reliability factors upon which access can be denied, utilities urge the Commission to resist the adoption of specific rules because the circumstances affecting safety and reliability are too diverse for precise regulatory packaging. One commenter suggests that the method of delivering electricity varies among utilities and a single set of safety rules would not account for these varying delivery methods.[2754] Although utilities have indicated that some broad

[2747] Duquesne Light comments at 3-4; Public Service Company of New Mexico comments at 5-7; NEES comments at 15.

[2748] PECO comments at 7-8; Duquesne comments at 17; NU System Companies comments at 4-5; American Electric comments at 23-24.

[2749] NU System Companies comments at 5;

[2750] American Electric comments at 21; Kansas City Power & Light comments at 3.

[2751] New Mexico Public Service comments at 15.

[2752] Duquesne comments at 17; NU System Companies comments at 5.

[2753] ConEd comments at 10.

[2754] Duquesne comments at 21.

national safety standards, such as the National Electric Safety Code ("NESC"),[2755] may be useful to guide parties regarding access generally, they argue stricter standards beyond such accepted codes would not be workable. Instead, utilities propose case-by-case adjudication of disputes because the range of applicable circumstances will frustrate attempts at regulatory specificity.[2756]

1131. To some degree, the comments of LECs reflect concerns similar to those expressed by electric utilities. With respect to the definition of nondiscrimination, however, the Commission received a diverse range of opinion from LEC commenters. Some LECs argue that nondiscrimination does not require parity with the access terms that a facility owner provides to itself because the statute does not explicitly require such parity,[2757] or because requiring parity would work an unconstitutional taking by relegating a facility owner to non-owning status.[2758] Other LECs argue that nondiscrimination obligates facility owners to provide access similar to what the owner provides to itself for similar uses.[2759] Another commenter suggests that the requirement of nondiscrimination prohibits discrimination against entities competing against the facility owner's affiliate, but does not necessarily require parity as long as the facility owner does not impose unreasonable impediments on the use of the facility by unaffiliated entities.[2760]

1132. Generally, LECs oppose detailed rules regarding nondiscrimination and access, arguing in favor of flexibility to accommodate individual circumstances,[2761] and to promote private industry negotiation.[2762] LEC commenters cite a variety of situations that, in their view, present circumstances that cannot be regulated beyond the articulation of broad guidelines or principles. They argue against the imposition of standards for determining sufficient capacity because utilities need flexibility to make good faith judgments about future service demands.[2763] One LEC commenter, however, advocates capacity reservations based on a five-year business

[2755] 1993 National Electric Safety Code, Institute of Electrical and Electronics Engineers, Inc. (1992).

[2756] PECO comments at 6; NEES comments at 14.

[2757] Ameritech comments at 34; PacTel comments at 19-20.

[2758] GTE comments at 23-24.

[2759] Bell Atlantic comments at 13; NYNEX comments at 14.

[2760] PacTel comments at 19-21.

[2761] PacTel comments at 18.

[2762] SBC comments at 15-16; GTE comments at 22-23; Rural Tel. Coalition at 10.

[2763] USTA comments at 10; Ameritech comments at 37; BellSouth comments at 14-15; PacTel comments at 20.

forecast.[2764]

1133. Similarly, LECs oppose specific standards governing access denials due to safety and engineering concerns. LECs argue that municipal rules have governed this area for years, obviating the need for federal guidelines.[2765] In their view, established safety codes exist and additional standards imposed at the federal level may conflict with these accepted standards.[2766] A wide variety of concerns could affect the safety and reliability of a network and attachments to poles within a network, according to commenters, including wind resistance, local height regulations, working space requirements between attachments, national safety codes and federal and state occupational safety rules.[2767] Although the precise language of section 224(f)(2) allows electric utilities to deny access for safety, reliability, and engineering concerns, LECs contend they confront the same concerns and need the same authority to deny access when safety or network reliability is jeopardized.[2768]

1134. IXCs argue that nondiscrimination requires an incumbent LEC to provide access on the same terms and conditions that apply to the incumbent LEC or its affiliate.[2769] One IXC suggests that all users of poles and rights-of-way should pay the same rate regardless of the service provided. Under this view, uniform pricing would promote incipient competition.[2770] IXCs contend, however, that access obligations are not reciprocal or symmetrical under section 224. Rather, they contend regulatory asymmetry is required under section 251(b)(4) because that section incorporates section 224 which specifically exempts incumbent LECs from the class of entities entitled to access.[2771]

1135. On capacity questions, IXCs argue strongly for limits on the amount of capacity utilities can reserve for future use. Essentially, they contend the reservation of space, if allowed at all, must be circumscribed by precise standards. For example, a reservation might be allowed

[2764] SBC comments at 18-19.

[2765] Ameritech comments at 38; GTE comments at 25-26; BellSouth comments at 16-17.

[2766] GTE comments at 25-26; Bell Atlantic comments at 14.

[2767] BellSouth comments at 16-17.

[2768] Bell Atlantic comments at 14; Ameritech comments at 38; NYNEX comments at 14.

[2769] MCI comments at 21; Sprint comments at 16.

[2770] Sprint comments at 17-18.

[2771] *See* 47 U.S.C. § 224(a)(5); AT&T reply at 24. One LEC argues, however, that section 251 obligations apply to all LECs, including IXCs if they become LECs within the meaning of the Act. PacTel reply at 23.

for use within a one-year forecast period.[2772] IXCs also contend that claims of insufficient capacity must be scrutinized carefully and that LECs, to the extent they deny access due to capacity constraints, must carry the burden of proving access requests from competitors cannot be accommodated.[2773]

1136. As for safety and reliability concerns, AT&T argues for specific standards to define circumstances under which access can be denied. Whether or not quantifiable standards are adopted, AT&T suggests that the burden of proof should be on utilities to prove they meet applicable standards because utilities or other facility owners, rather than the parties requesting attachments, would have access to information needed to evaluate a particular claim.[2774] Moreover, AT&T argues, under the literal terms of section 224(f)(2), only electric utilities, not incumbent LECs, have explicit authority to justify access denials based on safety, reliability or engineering concerns.[2775]

1137. CAPS favor a literal construction of nondiscrimination, arguing that a loose definition of the term could entice incumbent LECs and utilities to obstruct competition.[2776] Despite recognition that, for the most part, incumbent LECs have been cooperative in allowing access to poles, they contend that on several occasions, LECs and utilities have obstructed such access.[2777] With respect to capacity sufficiency, CAPS agree with LECs that available capacity is a fact-dependent issue, but encourage the Commission to establish standards that would ensure access when existing facilities can be configured to accommodate new telecommunications entrants.[2778] In addition, they support placing the burden of proof to justify denials of access on LECs and utilities subject to an audit of LEC outside plant records.[2779] Similarly, with respect to safety and reliability issues, CAPS advocate the adoption of standards requiring quantifiable threats to safety or reliability before access can be denied.[2780] They, along with the Telecommunications Resellers Association, also favor imposing proof burdens on LECs and

[2772] AT&T comments at 16.

[2773] MCI comments at 23; AT&T comments at 17; Sprint comments at 16-17.

[2774] AT&T comments at 17-18.

[2775] AT&T reply at 11.

[2776] American Communications Services comments at 6.

[2777] American Communications Services comments at 6; GST Telecom comments at 4.

[2778] MFS comments at 10; American Communications Services comments at 7.

[2779] American Communications Services comments at 7; MFS comments at 11.

[2780] MFS comments at 11; GST Telecom comments at 5.

utilities in such cases.[2781] In addition, CAPS support limits on survey or engineering fees that utilities may charge before proceeding with a competitor's attachment or other facility installation.[2782]

1138. Cable operators emphasize that access to poles, conduits and other facilities of LECs and utilities is critical to their ability to compete in the provision of telecommunications services as facilities-based competitors.[2783] Generally, cable operators support a definition of nondiscrimination that ensures that utilities cannot provide access to their facilities that is inferior to that provided to themselves or their affiliates.[2784] Moreover, small cable operators expressed support for the adoption of detailed national rules which they contend will strengthen their ability to negotiate acceptable pole attachment terms.[2785]

1139. With respect to capacity concerns, cable operators urge the Commission to construe narrowly the conditions under which access can be denied based on claims of insufficient capacity. Because access is critical to facilities-based competition, they argue, the Commission should adopt capacity standards that presume the availability of access as long as the new competitor can overcome whatever obstacles stand in the way of making the pole or facility capable of additional attachments.[2786] To underscore the importance of access to facilities-based competition, NCTA notes that Congress explicitly incorporated access to poles, conduits and rights-of-way in both section 251(b)(4) and section 271(c)(2) of the 1996 Act, recognizing that accessibility to such facilities is critical to finding genuine competition in the provision of local exchange service.[2787]

1140. Similarly, with regard to access denials based on claims of safety, reliability or engineering concerns, cable operators support using the NESC as the benchmark for resolving disputes over such issues. To the degree factors or standards other than those set forth in the NESC are relied upon to justify access, cable operators support a presumption that such denials are unreasonable and support the imposition of proof burdens on any LEC or utility making such

[2781] MFS comments at 11; GST Telecom comments at 5; Telecommunications Resellers Assn. comments at 13.

[2782] MFS comments at 11; GST Telecom comments at 6.

[2783] NCTA comments at 3-4.

[2784] Cole comments at 18.

[2785] Small Cable Business Association Comments at 21.

[2786] Summit comments at 1; Cole comments at 17.

[2787] NCTA comments at 12.

claims.[2788]

1141. In their comments, state commissions emphasize their experience in dealing with pole attachment issues. One state commission indicates that its procedures for handling disputes concerning access to poles, conduits, and rights-of-way are sufficient and that any changes in procedures are unnecessary at this time.[2789] Moreover, state Commissions emphasize that the statute itself recognizes the prominent role of state and local regulation in the area of pole attachments, citing the preservation of state preemption of federal rules when a state has regulated in this area.[2790]

1142. With respect to the definition of nondiscrimination, state commissions urge us to ensure that incumbent LECs provide access to poles and other facilities on terms that do not discriminate unreasonably between similarly situated carriers.[2791] The Ohio Consumers' Counsel agrees, suggesting that nondiscrimination requires that LECs provide competitors access on the same terms it provides to itself or its affiliates.[2792] As for the various reasons that may be asserted to justify denial of access, the Ohio Commission and Ohio Consumers' Counsel argue that a heavy burden should be placed on the LEC or utility denying access to demonstrate whenever capacity constraints, safety issues or reliability concerns are claimed for the access denial.[2793]

c. Discussion

(1) Generally

1143. We conclude that the reasonableness of particular conditions of access imposed by a utility should be resolved on a case-specific basis. We discuss below the forum for such resolutions.[2794] The record makes clear that there are simply too many variables to permit any other approach with respect to access to the millions of utility poles and untold miles of conduit

[2788] NCTA comments at 12; Cole comments at 18.

[2789] Illinois Commission comments at 72.

[2790] District of Columbia Commission comments at 9.

[2791] Illinois Commission comments at 73-74; Texas Commission comments at 3; California Commission comments at 5.

[2792] Ohio Consumers' Counsel comments at 5-6.

[2793] Ohio Commission comments at 11-12; Ohio Consumers' Counsel comments at 5-6.

[2794] *See infra*, Section E.

in the nation.[2795] The broader access mandated by the Act, in conjunction with the reasonableness variables mentioned here, will likely increase the number of disputes over access. In turn, this may cause small incumbent LECs and small entities to incur the need for additional resources to evaluate, process, and resolve such disputes, as well as to make poles and conduits physically accessible.[2796] We will not enumerate a comprehensive regime of specific rules, but instead establish a few rules supplemented by certain guidelines and presumptions that we believe will facilitate the negotiation and mutual performance of fair, pro-competitive access agreements. We will monitor the effect of this approach and propose more specific rules at a later date if reasonably necessary to facilitate access and the development of competition in telecommunications and cable services. We believe that the rules, guidelines and presumptions established herein strike the appropriate balance between the need for uniformity, on the one hand, and the need for flexibility, on the other, which should minimize the regulatory burdens and economic impact for both small entities and small incumbent LECs.[2797]

1144. We also address the impact on small incumbent LECs. For example, the Rural Telephone Coalition opposes adoption of sweeping national rules because local circumstances will be relevant to disputes over access to poles or rights-of-way.[2798] We have considered the economic impact of our rules in this section on small incumbent LECs. For example, we have adopted a flexible regulatory approach to pole attachment disputes that ensures consideration of local conditions and circumstances.

1145. Our determination not to prescribe numerous specific rules is supported by acknowledgements in the relevant national industry codes that no single set of rules can take into account all of the issues that can arise in the context of a single installation or attachment. The NESC, one of the national codes that virtually all commenters regard as containing reasonable attachment requirements, contains thousands of rules and dozens of tables and figures, all designed to ensure "the practical safeguarding of persons during the installation, operation, or maintenance of electric supply and communication lines and associated equipment."[2799]

1146. For example, with respect to overhead wires, the NESC contains 64 pages of rules dictating minimum "clearances," i.e., the minimum separations between a particular wire, cable,

[2795] Delmarva comments at 6.

[2796] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

[2797] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

[2798] RTC comments at 14.

[2799] NESC § 010.

or other piece of equipment and other wires, cables, equipment, structures, and property.[2800] A short list of only a few of the variables in that discussion includes: the type of wire or equipment in question; the type of current being transmitted; the nature of the structure supporting the wires; the proximity and nature of other equipment and structures; the temperature of the conducting element; and the use of the land below the wires. These separation requirements dictate the required distances between various wires and other transmission and distribution equipment, as well distances between such equipment and other objects that are not a part of the transmission and distribution network. Prescribed separations between wires will vary between the point at which wires are attached to a pole and at mid-points between poles, with the latter separations dictated by the predicted amount of sag that the wires will experience. The amount of sag will itself depend upon additional variables. Changing just one variable can radically alter the separation requirements.[2801] Other rules dictate: electrical loading requirements that vary depending upon wind and ice conditions and the predicted sag of the lines being installed; structural strength requirements that vary depending upon the amount and type of installations an the nature of the supporting structure; and line insulation requirements. A wholly separate and equally extensive array of rules apply to underground lines.

1147. Despite this specificity, the introduction to the NESC states that the code "is not intended as a design specification or an instruction manual."[2802] Indeed, utilities typically impose requirements more stringent than those prescribed by NESC and other industry codes.[2803] In some cases stricter requirements and restrictions are dictated by federal, state, or local law.[2804] Potentially applicable federal regulations include rules promulgated by the Federal Energy Regulatory Commission ("FERC") and by the Occupational Safety and Health Administration ("OSHA").[2805] Various restrictions can apply at the state level as well.[2806] Some local requirements governing zoning, aesthetics, or road clearances impose more stringent or more

[2800] NESC § 23.

[2801] For example, depending upon other conditions there are at least 16 potentially applicable clearance requirements relating specifically to wires passing over or near swimming pools. Separate sets of clearance requirements apply to wires in the vicinity of rail cars, and for wires attached near bridges.

[2802] NESC § 010.

[2803] NU comments at 4-5; BellSouth comments at 16-17; Virginia Electric comments at 10-12; Carolina comments at 4; NEES comments at 11.

[2804] NEES comments at 6, 11; PECO comments at 2; Duquesne comments at 11-12; Virginia comments at 11-12

[2805] Texas Commission comments at 4; NEES comments at 11; American Electric comments at 25. *See* 29 C.F.R. §§ 1910.268, 1910.269.

[2806] NEES comments at 6 (*citing* Massachusetts statute prohibiting electric utilities from permitting attachments to their transmission facilities); Duquesne comments at 11-12 (describing similar restriction under Wisconsin law).

specific requirements than those of the national industry codes or of federal or state law.[2807]

1148. In addition to operating under federal, state, and local requirements, a utility normally will have its own operating standards that dictate conditions of access.[2808] Utilities have developed their own individual standards and incorporated them into pole attachment agreements because industry-wide standards and applicable legal requirements are too general to take into account all of the variables that can arise.[2809] A utility's individual standards cover not simply its policy with respect to attachments, but all aspects of its business. Standards vary between companies and across different regions of the country based on the experiences of each utility and on local conditions.[2810] As Duquesne notes, the provision of electricity is the result of varied engineering factors that continue to evolve.[2811] Because there is no fixed manner in which to provide electricity, there is no way to develop an exhaustive list of specific safety and reliability standards.[2812] In addition, increasing competition in the provision of electricity is forcing electric utilities to engineer their systems more precisely, in a way that is tailored to meet the specific needs of the electric company and its customers.[2813] As a result, each utility has developed its own internal operating standards to suit its individual needs and experiences.[2814]

1149. The record contains numerous factors that may vary from region to region, necessitating different operating procedures particularly with respect to attachments. Extreme temperatures, ice and snow accumulation, wind, and other weather conditions all affect a utility's safety and engineering practices.[2815] In some instances, machinery used by local industries requires higher than normal clearances. Particular utility work methods and equipment may require specific separations between attachments and may restrict the height of the poles that a

[2807] American Electric comments at 36; Delmarva comments at 10-11; Ameritech comments at 38; PECO comments at 2.; Duquesne comments at 11-13; ConEd comments at 11.

[2808] American comments at 26, 36; NEES comments at 11.

[2809] Virginia Power comments at 13; NEES comment at 11; NU comments at 4-5.

[2810] ConEd comments at 5; Duquesne comments at 7; NEES comments at 11.

[2811] Duquesne comments at 21.

[2812] *Id.*; UTC reply at 20.

[2813] Duquesne comments at 21.

[2814] ConEd reply at 2.

[2815] NEES comments at 11; Carolina comments at 4; American Electric comments at 31.

utility will use.[2816] The installation and maintenance of underground facilities raise distinct safety and reliability concerns.[2817] It is important that such variables be taken into account when drafting pole attachment agreements and considering an individual attachment request. The number of variables makes it impossible to identify and account for them all for purposes of prescribing uniform standards and requirements.[2818] Universally accepted codes such as the NESC do not attempt to prescribe specific requirements applicable to each attachment request and neither shall we.

1150. We are sensitive to concerns of cable operators and telecommunications carriers regarding utility-imposed restrictions that could be used unreasonably to prevent access.[2819] We note in particular that a utility that itself is engaged in video programming or telecommunications services has the ability and the incentive to use its control over distribution facilities to its own competitive advantage. A number of utilities have obtained, or are seeking, the right and ability to provide telecommunications or video programming services.[2820] We agree, however, with Duquesne that the best safeguard is not the adoption of a comprehensive set of substantive engineering standards, but the establishment of procedures that will require utilities to justify any conditions they place on access.[2821] These procedures are outlined in section E below. In the next two sections, we set forth rules of general applicability and broader guidelines relating to specific issues that are intended to govern access negotiations between the parties.

(2) Specific Rules

1151. We establish five rules of general applicability. First, in evaluating a request for access, a utility may continue to rely on such codes as the NESC to prescribe standards with respect to capacity, safety, reliability, and general engineering principles. We have no reason to question the reasonableness of the virtually unanimous judgment of the commenters, many of whom have otherwise diverse and conflicting interests, in this regard.[2822] Utilities may incorporate such standards into their pole attachment agreements in accordance with section

[2816] American Electric comments at 20; NEES comments at 11; Carolina comments at 4.

[2817] ConEd comments at 7; Kansas City comments at 3-4; UTC reply at 20.

[2818] American Electric comments at 18-20, 36; Delmarva reply at 7-8.

[2819] Cole comments 3-7.

[2820] Cole reply at 3-7.

[2821] Duquesne comments at 21.

[2822] Cole comments at 22; American Electric comments at 22; NCTA reply at 6-7; UTC reply at 15-16; Virginia Power reply at 6; Ohio Edison reply at 23-24.

224(f)(2). Other industry codes also will be presumed reasonable if shown to be widely-accepted objective guides for the installation and maintenance of electrical and communications facilities.

1152. Second, federal requirements, such as those imposed by FERC and OSHA, will continue to apply to utilities to the extent such requirements affect requests for attachments to utility facilities under section 224(f)(1). We see no reason to supplant or modify applicable federal regulations promulgated by FERC, OSHA, or other federal agencies acting in accordance with their lawful authority.

1153. Third, we will consider state and local requirements affecting pole attachments. We note that section 224(c)(1) provides:

> Nothing in this section shall be construed to apply to, or to give the Commission jurisdiction with respect to rates, terms and conditions, or access to poles, ducts, conduits, and rights-of-way as provided in subsection (f), for pole attachments in any case where such matters are regulated by the State.[2823]

1154. In a separate section we discuss the authority of a state to preempt federal regulation of pole attachments.[2824] For present purposes, we conclude that state and local requirements affecting attachments are entitled to deference even if the state has not sought to preempt federal regulations under section 224(c).[2825] The 1996 Act increased significantly the Commission's role with respect to attachments by creating federal access rights and obligations, which for decades had been the subject of state and local regulation. Such regulations often relate to matters of local concern that are within the knowledge of local authorities and are not addressed by standard codes such the NESC.[2826] We do not believe that regulations of this sort necessarily conflict with the scheme established in this Order. More specifically, we see nothing in the statute or in the record that compels us to preempt such local regulations as a matter of course. Regulated entities and other interested parties are familiar with existing state and local requirements and have adopted operating procedures and practices in reliance on those requirements. We believe it would be unduly disruptive to invalidate summarily all such local requirements. We thus agree with commenters who suggest that such state and local requirements should be presumed reasonable.[2827] Thus, even where a state has not asserted preemptive authority in accordance with section 224(c), state and local requirements affecting pole

[2823] 47 U.S.C. § 224(c)(1).

[2824] *See infra*, Section E.

[2825] New Mexico comments at 12; Ohio comments at 11.

[2826] *See supra*, Section B.2.

[2827] PECO comments at 2; Kansas City comments at 2-3; NEES reply at 13.

attachments remain applicable, unless a complainant can show a direct conflict with federal policy. Where a local requirement directly conflicts with a rule or guideline we adopt herein, our rules will prevail. We note that a standard prescribed by the NESC is not a specific Commission rule, and therefore a state requirement that is more restrictive than the corresponding NESC standard may still apply.

1155. It is important to note that the discretion of state and local authorities to regulate in the area of pole attachments is tempered by section 253, which invalidates all state or local legal requirements that "prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."[2828] This restriction does not prohibit a state from imposing "on a competitively neutral basis and consistent with section 254, requirements necessary to preserve and advance universal service, protect the public safety and welfare, ensure the continued quality of telecommunications services, and safeguard the rights of consumers."[2829] In addition, section 253 specifically recognizes the authority of state and local governments to manage public rights-of-way and to require fair and reasonable compensation for the use of such rights-of-way.[2830]

1156. Fourth, where access is mandated, the rates, terms, and conditions of access must be uniformly applied to all telecommunications carriers and cable operators that have or seek access.[2831] Except as specifically provided herein, the utility must charge all parties an attachment rate that does not exceed the maximum amount permitted by the formula we have devised for such use, and that we will revise from time to time as necessary.[2832] Other terms and conditions also must be applied on a nondiscriminatory basis.[2833]

1157. Fifth, except as specifically noted below, a utility may not favor itself over other parties with respect to the provision of telecommunications or video programming services.[2834] We interpret the statutory requirement of nondiscriminatory access as compelling this result, particularly when read in the context of other provisions of the statute. This element of

[2828] 47 U.S.C. § 253(a).

[2829] 47 U.S.C. § 253(b); section 254 sets forth specific provisions related to universal service.

[2830] 47 U.S.C. § 253(c). *See* Ameritech reply at 10.

[2831] 47 U.S.C. § 224(f)(1). As noted above, incumbent LECs are excluded from the definition of "telecommunications carrier" for purposes of section 224. 47 U.S.C. § 224(a)(5).

[2832] *See* 47 C.F.R. § 1.1404.

[2833] *See supra*, Sections IV.G. and V.G. for a discussion of the meaning of "nondiscriminatory."

[2834] 47 U.S.C. § 224(f)(1); *see* Ohio Consumers' Counsel comments at 5; California comments at 5; MCI comments at 21; Sprint comments at 16; ACSI comments at 6-7.

nondiscrimination is evident in section 224(g), which requires a utility to impute to itself or to its affiliate the pole attachment rate such entity would be charged were it a non-affiliated entity.[2835] Further, we believe it unlikely that Congress intended to allow an incumbent LEC to favor itself over its competitors with respect to attachments to the incumbent LEC's facilities, given that section 224(a)(5) has just the opposite effect in that it operates to preclude the incumbent LEC from obtaining access to the facilities of other LECs. A utility will be able to discriminate in favor of itself with respect to the provision of telecommunications or cable services only as expressly provided herein.

1158. Aside from the conditions described above, we will not adopt specific rules to determine when access may be denied because of capacity, safety, reliability, or engineering concerns. In addition, we reject the contention of some utilities that they are the primary arbiters of such concerns, or that their determinations should be presumed reasonable.[2836] We recognize that the public welfare depends upon safe and reliable provision of utility services, yet we also note that the 1996 Act reinforces the vital role of telecommunications and cable services. As noted above, section 224(f)(1) in particular reflects Congress' intention that utilities must be prepared to accommodate requests for attachments by telecommunications carriers and cable operators.

(3) Guidelines Governing Certain Issues

1159. In addition to the rules articulated above, we will establish guidelines concerning particular issues that have been raised in this proceeding. These guidelines are intended to provide general ground rules upon which we expect the parties to be able to implement pro-competitive attachment polices and procedures through arms-length negotiations, rather than having to rely on multiple adjudications by the Commission in response to complaints or by other forums. We do not discuss herein every issue raised in the comments. Rather, we discuss only major issues that we believe will arise often. Issues not discussed herein may be important in a particular case, but are not susceptible to any general observation or presumption.

1160. We note that a utility's obligation to permit access under section 224(f) does not depend upon the execution of a formal written attachment agreement with the party seeking access. We understand that such agreements are the norm and encourage their continued use, subject to the requirements of section 224. Complaint or arbitration procedures will, of course, be available when parties are unable to negotiate agreements.[2837]

[2835] 47 U.S.C. § 224(g).

[2836] American Electric comments at 14, 21; NEES comments at 14; ConEd comments at 11; Delmarva reply at 8.

[2837] *See infra*, Section E.

(a) Capacity Expansions

1161. When a utility cannot accommodate a request for access because the facility in question has no available space, it often must modify the facility to increase its capacity.[2838] In some cases, a request for access can be accommodated by rearranging existing facilities to make room for a new attachment.[2839] Another method of maximizing useable capacity is to permit "overlashing," by which a new cable is wrapped around an existing wire, rather than being strung separately.[2840] A utility pole filled to capacity often can be replaced with a taller pole.[2841] New underground installations can be accommodated by the installation of new duct, including subducts that divide a standard duct into four separate, smaller ducts.[2842] Cable companies and others contend that there is rarely a lack of capacity given the availability of taller poles and additional conduits.[2843] These commenters suggest that utilities should rarely be permitted to deny access on the basis of a lack of capacity, particularly since under section 224(h) the party or parties seeking to increase capacity will be responsible for all associated costs.[2844] Utilities argue that neither the statute nor its legislative history requires facility owners to expand or alter their facilities to accommodate entities seeking to lease space.[2845] These commenters argue that, if Congress intended such a result, the statute would have imposed the requirement explicitly.[2846]

1162. A utility is able to take the steps necessary to expand capacity if its own needs require such expansion. The principle of nondiscrimination established by section 224(f)(1) requires that it do likewise for telecommunications carriers and cable operators.[2847] In addition, we note that section 224(f)(1) mandates access not only to physical utility facilities (*i.e.*, poles,

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[2838] Cole comments at 9; ConEd comments at 10; MFS comments at 10; NCTA reply at 5-6.

[2839] GST Telecom comments at 5.

[2840] MFS comments at 10; GST Telecom comments at 5.

[2841] Cole comments at 14-15.

[2842] GST Telecom comments at 5; Cole comments at 17.

[2843] Cole comments at 15.

[2844] NCTA comments at 12; Summit comments at 1; MCI comments at 23.

[2845] American Electric reply at 19; ConEd reply at 5; U S West reply at 7; GTE reply at 26; Virginia Power reply at 5.

[2846] SBC reply at 21.

[2847] AT&T reply at 14-15; MFS reply at 22. We note that this standard differs from the one we adopt for collocation of equipment on incumbent LEC premises under section 251(c)(6). *See supra*, Section VI.

ducts, and conduit), but also to the rights-of-way held by the utility. The lack of capacity on a particular facility does not necessarily mean there is no capacity in the underlying right-of-way that the utility controls. For these reasons, we agree with commenters who argue that a lack of capacity on a particular facility does not automatically entitle a utility to deny a request for access. Since the modification costs will be borne only by the parties directly benefitting from the modification,[2848] neither the utility nor its ratepayers will be harmed, despite the assertions of utilities to the contrary.[2849]

1163. In some cases, however, increasing capacity involves more than rearranging existing attachments or installing a new pole or duct. For example, the record suggests that utility poles of 35 and 40 feet in height are relatively standard, but that taller poles may not always be readily available.[2850] The transportation, installation, and maintenance of taller poles can entail different and more costly practices.[2851] Many utilities have trucks and other service equipment designed to maintain poles of up to 45 feet, but no higher.[2852] Installing a 50 foot pole may require the utility to invest in new and costly service equipment.[2853] Expansion of underground conduit space entails a very complicated procedure, given the heightened safety and reliability concerns associated with such facilities.[2854] Local regulators may seek to restrict the frequency of underground excavations. We find it inadvisable to attempt to craft a specific rule that prescribes the circumstances in which, on the one hand, a utility must replace or expand an existing facility in response to a request for access and, on the other hand, it is reasonable for the utility to deny the request due to the difficulties involved in honoring the request. We interpret sections 224(f)(1) and (f)(2) to require utilities to take all reasonable steps to accommodate requests for access in these situations. Before denying access based on a lack of capacity, a utility must explore potential accommodations in good faith with the party seeking access.

1164. We will not require telecommunications providers or cable operators seeking access to exhaust any possibility of leasing capacity from other providers, such as through a resale

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[2848] *See infra*, Section 2(b).

[2849] *See, e.g.*, Ohio Ed reply at 19.

[2850] NEES comments at 8; Cole comments at 15.

[2851] Carolina comments at 3-4; American Electric comments at 23.

[2852] NEES comments at 8-9.

[2853] UTC reply at 17.

[2854] American Electric comments at 20, 31; ConEd comments at 7; Kansas City comments at 3-4; UTC comments at 18. Some commenters assert that expanding conduit capacity is impractical. Delmarva reply at 7.

agreement, before requesting a modification to expand capacity.[2855] As indicated elsewhere in this Order, resale will play an important role in the development of competition in telecommunications. However, as we also have noted, there are benefits to facilities-based competition as well. We do not wish to discourage unduly the latter form of competition solely because the former might better suit the preferences of incumbent utilities with respect to pole attachments.

(b) Reservation of space by utility

1165. Utilities routinely reserve space on their facilities to meet future needs.[2856] Local economic growth and property development may require an electric utility to install additional lines or transformers that use previously available space on the pole.[2857] A utility may install an underground duct in which it can later install additional distribution lines, if necessitated by a subsequent increase in demand or by damage to the original lines.[2858] Reserving space allows the utility to respond quickly and efficiently to changed circumstances. This practice, however, also can result in a utility denying access to a telecommunications carrier or a cable operator even though there is unused capacity on the pole or duct.

1166. This issue is of particular concern because section 224(h) imposes the cost of modifying attachments on those parties that benefit from the modification.[2859] If, for example, a cable operator seeks to make an attachment on a facility that has no available capacity, the operator would bear the full cost of modifying the facility to create new capacity, such as by replacing an existing pole with a taller pole. Other parties with attachments would not share in the cost, unless they expanded their own use of the facilities at the same time. If the electric utility decides to change a pole for its own benefit, and no other parties derive a benefit from the modification, then the electric company would bear the full cost of the new pole.

1167. Some commenters contend that utilities will reserve space on a pole and then claim there is no capacity available, as a way of forcing cable operators and telecommunications carriers to pay for new utility facilities. These commenters contend that we should restrict or eliminate

[2855] *See* PNM comments at 20; Carolina comments at 5; American Electric reply at 14.

[2856] American Electric comments at 43; UTC reply at 22.

[2857] Virginia Power comments at 8; American comments at 23; Connecticut Light comments at 5.

[2858] Ohio Edison comments at 16-17; ConEd comments at 9.; Delmarva reply at 5.

[2859] *See infra*, Section (C)(3).

the authority of utilities to reserve space.[2860] Utilities respond that it is unfair to force a utility to accommodate full occupation of its facility by third parties and then to saddle the utility with the cost of modifying the facility when the utility's own needs change and require a costly increase in capacity.[2861]

1168. The near-universal public demand for their core utility services, while imposing certain obligations, arguably entitles utilities to certain prerogatives vis-a-vis other parties, including the right to reserve capacity to meet anticipated future demand for those utility services.[2862] Recognition of such a right, however, could conflict with the nondiscrimination requirement of section 224(f)(1) which prohibits a utility from favoring itself or its affiliates with respect to the provision of telecommunications and video services.[2863] In addition, allowing space to go unused when a cable operator or telecommunications carrier could make use of it is directly contrary to the goals of Congress.

1169. Balancing these concerns leads us to the following conclusions. We will permit an electric utility to reserve space if such reservation is consistent with a bona fide development plan that reasonably and specifically projects a need for that space in the provision of its core utility service. The electric utility must permit use of its reserved space by cable operators and telecommunication carriers until such time as the utility has an actual need for that space. At that time, the utility may recover the reserved space for its own use. The utility shall give the displaced cable operator or telecommunications carrier the opportunity to pay for the cost of any modifications needed to expand capacity and to continue to maintain its attachment.[2864] An electric utility may not reserve or recover reserved space to provide telecommunications or video programming service and then force a previous attaching party to incur the cost of modifying the facility to increase capacity, even if the reservation of space were pursuant to a reasonable development plan. The record does not contain sufficient data for us to establish a presumptively reasonable amount of pole or conduit space subject that an electric utility may reserve. If parties cannot agree, disputes will be resolved on a case-by-case approach based on the reasonableness of the utility's forecast of its future needs and any additional information that is relevant under the circumstances.

[2860] MCI comments at 23; ACSI comments at 6-8; MFS comments at 7; Time Warner comments at 14; AT&T reply at 14-15.

[2861] AEP comments at 42-43; Duquesne comments at 17; PECO comments at 7; Delmarva comments at 14.

[2862] PNM comments at 8-9; American Electric comments at 13; ConEd reply at 4-5.

[2863] Ohio Consumers Counsel comments at 5-6; Delmarva comments at 8.

[2864] This standard differs from the one we adopt for allocation of collocation space under section 251(c)(4). *See supra*, Section VI.

1170. With respect to a utility providing telecommunications or video services, we believe the statute requires a different result. Section 224(f)(1) requires nondiscriminatory treatment of all providers of such services and does not contain an exception for the benefit of such a provider on account of its ownership or control of the facility or right-of-way. Congress seemed to perceive such ownership and control as a threat to the development of competition in these areas, thus leading to the enactment of the provision in question. Allowing the pole or conduit owner to favor itself or its affiliate with respect to the provision of telecommunications or video services would nullify, to a great extent, the nondiscrimination that Congress required. Permitting an incumbent LEC, for example, to reserve space for local exchange service, to the detriment of a would-be entrant into the local exchange business, would favor the future needs of the incumbent LEC over the current needs of the new LEC. Section 224(f)(1) prohibits such discrimination among telecommunications carriers. As indicated above, this prohibition does not apply when an electric utility asserts a future need for capacity for electric service, to the detriment of a telecommunications carrier's needs, since the statute does not require nondiscriminatory treatment of all utilities; rather, it requires nondiscriminatory treatment of all telecommunications and video providers.

(c) Definition of "Utility"

1171. The access obligations of section 224(f) apply to any "utility," which is defined as:

> any person who is a local exchange carrier or an electric, gas, water, steam, or other public utility, and who owns or controls poles, ducts, conduits, or other rights-of-way used, in whole or in part, for any wire communications. Such term does not include any railroad, any person who is cooperatively organized, or any person owned by the Federal Government or any State.[2865]

1172. Arguably a provider of utility service does not fall within this definition if it has refused to permit any wired communications use of its facilities and rights-of-way since, in that case, its facilities and rights-of-way are not "used, in whole or in part, for wire communications." Under this construction, an electric utility would have no obligation to grant access under section 224(f) until the utility voluntarily has granted access to one communications provider or has used its facilities for wire communications.[2866] Only after its facilities were being used for wire communications would the utility have to grant access to all telecommunications carriers and cable operators on a nondiscriminatory basis.

1173. We conclude that this construction of the statute is mandated by its plain language

[2865] 47 U.S.C. § 224(a)(1).

[2866] NU Systems comments at 2-3; UTC comments at 6-7.

and is indeed nondiscriminatory, since denial of access to all discriminates against none. We see no statutory basis, however, for the argument made by some utilities that they should be permitted to devote a portion of their poles, ducts, conduits, and rights-of-way to wire communications without subjecting all such property to the access obligations of section 224(f)(1).[2867] Those obligations apply to any "utility," which section 224(a)(1) defines to include an entity that controls "poles, ducts, conduits, or rights-of-way used, in whole or in part, for any wire communications."[2868] The use of the phrase "in whole or in part" demonstrates that Congress did not intend for a utility to be able to restrict access to the exact path used by the utility for wire communications. We further conclude that use of any utility pole, duct, conduit, or right-of-way for wire communications triggers access to all poles, ducts, conduits, and rights-of-way owned or controlled by the utility, including those not currently used for wire communications.

1174. We reject the contention that, because an electric utility's internal communications do not pose a competitive threat to third party cable operators or telecommunications carriers, such internal communications are not "wire communications" and do not trigger access obligations.[2869] Although internal communications are used solely to promote the efficient distribution of electricity, the definition of "wire communication" is broad and clearly encompasses an electric utility's internal communications.[2870]

(d) Application of Section 224(f)(2) to Non-Electric Utilities

1175. While all utilities are subject to the access obligations of section 224(f)(1), the provisions of section 224(f)(2), permitting a utility to deny access due to a lack of capacity or for reasons of safety, reliability, and generally applicable engineering purposes, apply only to "a utility providing electric service . . . ."[2871] Based on this statutory language, some commenters suggest that LECs and other utilities that do not provide electric service must grant requests for access, regardless of any concerns relating to safety, reliability, and general engineering principles.[2872] If there is a lack of capacity, a LEC must create more capacity, according to these

[2867] *See* American Electric comments at 12, n. 7.

[2868] 47 U.S.C. § 224(a)(1).

[2869] *See* UTC comments at 7; Delmarva reply at 5.

[2870] *See* 47 U.S.C. 3(51) ("The term 'wire communication" . . . means the transmission of writing, signs, signals, pictures, and sounds of all kinds by aid of wire, cable, or other like connection . . .").

[2871] 47 U.S.C. § 224(f)(2).

[2872] *See, e.g.*, AT& T comments at 16-17.

commenters.[2873]

1176. While the express language of sections 224(f)(1) and (f)(2) suggests that only utilities providing electric service can take into consideration concerns relating to safety and reliability, we are reluctant to ignore these concerns simply because the pole owner is not an electric utility. Even parties seeking broad access rights under section 224 recognize that, in some circumstances, a LEC will have legitimate safety or engineering concerns that may need to be accommodated.[2874] We believe that Congress could not have intended for a telecommunications carrier to ignore safety concerns when making pole attachment decisions. Rather than reach this dangerous result which would require us to ignore the dictates of sections 1[2875] and 4(o)[2876] of the Communications Act, we conclude that any utility may take into account issues of capacity, safety, reliability and engineering when considering attachment requests, provided the assessment of such factors is done in a nondiscriminatory manner.

1177. Nevertheless, we believe that section 224(f)(2) reflected Congress' acknowledgment that issues involving capacity, safety, reliability and engineering raise heightened concerns when electricity is involved, because electricity is inherently more dangerous than telecommunications services. Accordingly, although we determine that it is proper for non-electric utilities to raise these matters, they will be scrutinized very carefully, particularly when the parties concerned have a competitive relationship.

(e) Third-Party Property Owners

1178. Section 224(f)(1) mandates that the utility grant access to any pole, duct, conduit, or right-of-way that is "owned or controlled by it." Some utilities and LECs argue that certain private easement agreements, when interpreted under the applicable state property laws, deprive the utilities of the ownership or control that triggers their obligation to accommodate a request for access.[2877] Moreover, they contend, access to public rights-of-way may be restricted by state law

[2873] *Id.* at 16-17.

[2874] AT&T reply at 17, n. 40

[2875] 47 U.S.C. § 151 (establishing the Commission for the purpose of promoting a "rapid, efficient Nation-wide, and world-wide wire and radio and communication service with adequate facilities . . . [and] promoting safety of life and property . . .").

[2876] 47 U.S.C. § 154 (o) (promoting the "safety of life and property" with respect to the use of radio and wire communications).

[2877] UTC comments at 7-8; GVNW comments at 9; U S West reply at 6; BellSouth reply at 9; *see* BOMA reply at 3.

or local ordinances.[2878] Opposing commenters contend that the addition of cable television or telecommunications facilities is compatible with electric service and therefore does not violate easements that have been granted for the provision of electric service.[2879] These commenters also assert that the statute does not draw specific distinctions between private and public easements.[2880] Further, some cable operators contend that utility easements are accessible to cable operators pursuant to section 621(a)(2) of the Communications Act as long as the easements are physically compatible with such use, regardless of the terms of a written easement agreement.[2881] Another commenter suggests utilities are best positioned to determine when access requests would affect a private easement, foreclosing the need to determine whether a private owner would consent to the requested attachment.[2882] As for local ordinances restricting access to public rights-of-way, one commenter suggests that such restrictions would violate section 253(a) of the Act, which blocks state or local rules that prohibit competition.[2883]

1179. The scope of a utility's ownership or control of an easement or right-of-way is a matter of state law.[2884] We cannot structure general access requirements where the resolution of conflicting claims as to a utility's control or ownership depends upon variables that cannot now be ascertained. We reiterate that the access obligations of section 224(f) apply when, as a matter of state law, the utility owns or controls the right-of-way to the extent necessary to permit such access.

1180. Section 621(a)(2) states that a cable franchise shall be construed as authorizing the construction of cable facilities in public rights-of-way and "through easements . . . which have been dedicated for compatible uses . . . ."[2885] The scope of a cable operator's access to easements under this provision has been the subject of a number of court opinions.[2886] To the extent section

[2878] Rural Tel. reply at 4.

[2879] Cole comments at 16-17.

[2880] MFS reply at 16.

[2881] Cole comments at 17; *see* 47 U.S.C. § 541(a)(2).

[2882] AT&T reply at 18.

[2883] Sprint reply at 18.

[2884] *See* S. Rep. No. 580, 95th Cong., 1st Sess. 16 (1977).

[2885] 47 U.S.C. § 541(a)(2).

[2886] *TCI of North Dakota, Inc. v. Schriock Holding Co.*, 11 F.3d 812 (8th Cir. 1993); *Media General Cable of Fairfax, Inc. v. Sequoyah Condominium Council of Co-Owners*, 991 F.2d 1169 (4th Cir. 1993); *Cable Holdings of Georgia, Inc. v. McNeil Real Estate Fund VI, Ltd.*, 953 F.2d 600 (11th Cir.), *cert. den'd*, 506 U.S. 862 (1992); *Cable*

621(a)(2) has been construed to permit access to easements, a cable operator must be permitted to attach to utility poles, ducts, and conduits within such easements in accordance with section 224(f).

1181. Finally, we disagree with those utilities that contend that they should not be forced to exercise their powers of eminent domain to establish new rights-of-way for the benefit of third parties.[2887] We believe a utility should be expected to exercise its eminent domain authority to expand an existing right-of-way over private property in order to accommodate a request for access, just as it would be required to modify its poles or conduits to permit attachments. Congress seems to have contemplated an exercise of eminent domain authority in such cases when it made provisions for an owner of a right-of-way that "intends to modify or alter such . . . right-of-way . . . ."[2888]

(f) Other Matters

1182. Utilities stress the importance of ensuring that only qualified workers be permitted in the proximity of utility facilities. Some utilities seek to limit access to their facilities to the utility's own specially trained employees or contractors, particularly with respect to underground conduits.[2889] According to these commenters, parties seeking to make attachments to utility facilities should be required to pay for the use of the utility's workers if the utility concludes that only its workers are fit for the job. While we agree that utilities should be able to require that only properly trained persons work in the proximity of the utilities' lines, we will not require parties seeking to make attachments to use the individual employees or contractors hired or pre-designated by the utility. A utility may require that individuals who will work in the proximity of electric lines have the same qualifications, in terms of training, as the utility's own workers, but the party seeking access will be able to use any individual workers who meet these criteria. Allowing a utility to dictate that only specific employees or contractors be used would impede the access that Congress sought to bestow on telecommunications providers and cable operators and would inevitably lead to disputes over rates to be paid to the workers.

1183. Some electric utilities argue that high voltage transmission facilities should not be accessible by telecommunications carriers or cable operators under section 224(f)(1).[2890] These commenters contend that transmission facilities, which are used for high voltage transmissions

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Investments, Inc. v. Woolley, 867 F.2d 151 (3d Cir. 1989).

[2887] *But see* UTC comments at 15; Ohio Edison comments at 14-15.

[2888] 47 U.S.C. § 224(h).

[2889] Kansas City at 3-4.

[2890] NEES comments at 15-16; PECO comments at 4.

over great distances, are far more delicate and dangerous than local distribution facilities. Permitting attachments to transmission facilities, they argue, poses a greater risk to the safety and reliability of the electric distribution system than is the case with distribution lines. They further state that transmission facilities generally are not located where cable operators and telecommunications carriers need to install facilities. ConEd suggests that transmission towers do not even fall within the scope of the statute.[2891]

1184. Section 224(f)(1) mandates access to "any pole, duct, conduit, or right-of-way," owned or controlled by the utility. The utilities do not suggest that transmission facilities do not use poles or rights-of-way, for which the statute does mandate the right of access. The utilities' arguments for excepting transmission facilities from access requirements are based on safety and reliability concerns. We believe that the breadth of the language contained in section 224(f)(1) precludes us from making a blanket determination that Congress did not intend to include transmission facilities. As with any facility to which access is sought, however, section 224(f)(2) permits the electric utility to impose conditions on access to transmission facilities, if necessary for reasons of safety and reliability. To the extent safety and reliability concerns are greater at a transmission facility, the statute permits a utility to impose stricter conditions on any grant of access or, in appropriate circumstances, to deny access if legitimate safety or reliability concerns cannot be reasonably accommodated.[2892]

1185. We note that some commenters favor a broad interpretation of "pole, duct, conduit, or right-of-way" because that approach would minimize the risk that a "pathway" vital to competition could be shut off to new competitors.[2893] Others argue for a narrow construction of this statutory phrase, contending that Congress addressed access to other LEC facilities elsewhere in the 1996 Act.[2894] We recognize that an overly broad interpretation of this phrase could impact the owners and mangers of small buildings, as well as small incumbent LECs, by requiring additional resources to effectively control and monitor such rights-of-way located on their properties.[2895] We do not believe that section 224(f)(1) mandates that a utility make space available on the roof of its corporate offices for the installation of a telecommunications carrier's transmission tower,[2896] although access of this nature might be mandated pursuant to a request for

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[2891] ConEd comments at 6.

[2892] 47 U.S.C. § 224(f)(2).

[2893] AT&T comments at 14.

[2894] Ameritech reply at 8; NYNEX reply at 8; PacTel reply at 22.

[2895] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

[2896] *See* Winstar comments at 3.

interconnection or for access to unbundled elements under section 251(c)(6).[2897] The intent of Congress in section 224(f) was to permit cable operators and telecommunications carriers to "piggyback" along distribution networks owned or controlled by utilities, as opposed to granting access to every piece of equipment or real property owned or controlled by the utility.[2898]

1186. The statute does not describe the specific type of telecommunications or cable equipment that may be attached when access to utility facilities is mandated.[2899] We do not believe that establishing an exhaustive list of such equipment is advisable or even possible. We presume that the size, weight, and other characteristics of attaching equipment have an impact on the utility's assessment of the factors determined by the statute to be pertinent -- capacity, safety, reliability, and engineering principles. The question of access should be decided based on those factors.

3. Constitutional Takings

a. Background

1187. The access provisions of section 224(f) restrict the right of a utility to exclude third parties from its property and therefore may raise Fifth Amendment issues.[2900] While we have no jurisdiction to determine the constitutionality of a federal statute, constitutional concerns are relevant for purposes of construing a statute.[2901] For that reason, we here consider the constitutional issues raised in the comments.

b. Comments

1188. A number of utilities suggest that we must construe section 224(f) as permitting them to make the ultimate decision as to whether to grant access to their facilities and rights-of-way, on the grounds that a statute compelling them to grant access would be an unconstitutional

[2897] *See supra*, Section VI.B.

[2898] Ohio Edison reply at 12.

[2899] "The term 'pole attachment' means any attachment by a cable television system or provider of telecommunications service to a pole, duct, conduit, or right-of-way owned or controlled by a utility." 47 U.S.C. § 224(a)(4).

[2900] *See Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982).

[2901] *Bell Atlantic Telephone Cos. v. FCC*, 24 F.3d 1441, 1445 (D.C. Cir. 1994).

taking of their private property under the Fifth Amendment.[2902] AEP notes that in *FCC v. Florida Power Corp.* the Supreme Court upheld the 1978 Pole Attachments Act, in part because nothing in that statute compelled utilities "to enter into, renew, or refrain from terminating pole attachment agreements."[2903] By contrast, the Supreme Court held that a state law requiring a landlord to permit a cable operator to install and maintain cable facilities over the landlord's apartment building constituted a taking of private property.[2904] On the basis of these cases, AEP contends: "To pass constitutional muster, the access required under section 224(f)(1) must be voluntary."[2905] Likewise, Puget argues: "If the Commission interprets the act's access requirement broadly as mandating access to the facility owner's property to all who desire it, the Takings Clause would be violated."[2906]

1189. Other utilities argue that the Fifth Amendment is implicated by the access requirements of section 224(f)(1), but stop short of contending that mandating access under the statue renders it unconstitutional. U S West believes that any discussion of access under section 224(f)(1) "would be incomplete without explicit recognition of the fact that such mandatory occupation . . . constitutes the taking of private property. As such, both the Commission and respective state regulatory agencies must ensure that LECs receive just compensation for their taken property."[2907] Virginia Power believes that any mandatory access requirement would result in a taking of private property, and notes "the potential constitutional issue . . . ."[2908] UTC states that forced access "raises serious questions, regarding at least, the taking of property without just compensation."[2909] Finally, GTE suggests that mandatory access under section 224(f)(1) may be unconstitutional as a taking of private property without just compensation, when considered in conjunction with the method by which pole attachment rates will be determined under section 224(e)(2).[2910]

[2902] AEP comments at 7-10; Virginia Electric comments at 4; GTE comments at 23; Puget comments at 3; UTC comments at 4.

[2903] 480 U.S. 245, 251 n. 6 (1987).

[2904] *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982).

[2905] AEP comments at 7.

[2906] Puget comments at 3.

[2907] U S West comments at 16.

[2908] Virginia Power comments at 4.

[2909] UTC comments at 5.

[2910] GTE comments at 23 & n. 24.

1190. Other commenters contend that there are no relevant constitutional issues to be confronted. Cole argues that requiring a utility to connect its facilities with those of other parties is simply a condition of providing utility service.[2911] With respect to LECs, for instance, Cole states: "Part of the obligation of being a regulated telecommunications common carrier is to provide services deemed to be necessary by regulators whether the regulated common carrier 'wants' to provide them or not."[2912] Cole contends that mandatory access to poles and other facilities "has no impact on the applicable constitutional standard."[2913] "As long as the rates for pole space and services are not confiscatory," Cole asserts,"there simply is no taking."[2914] In the alternative, Cole argues that "even if the access provision of section 224(f)(1) does constitute a taking, any argument that the compensation provided by the statute is not compensatory must be decided in a specific case, and not in this generic rulemaking."[2915]

c. Discussion

1191. Section 224(f)(1) mandates that a utility grant access to a requesting telecommunications provider or cable system operator, subject to certain conditions that we discuss elsewhere in this Order. That provision is not reasonably susceptible of a reading that gives the pole owner the choice of whether to grant telecommunications carriers or cable television systems access. Even if such mandatory access results in a taking, we cannot agree that it necessarily raises a constitutional issue. The Fifth Amendment permits takings as long the property owner receives just compensation for the property taken.[2916]

1192. As for the amount of compensation provided under the statute, GTE suggests that mandatory access will result in an unconstitutional taking when considered in conjunction with the methodology for pole attachment rates set forth in section 224(e)(2). We, of course, have no power to declare any provision of the Communications Act unconstitutional.[2917] In any event, we cannot agree. Congress has provided for compensation to pole owners, in the event that they cannot resolve a dispute with telecommunications carriers regarding the charges for use of the

[2911] Cole comments at 28.

[2912] *Id.* at 7.

[2913] *Id.* at 29.

[2914] *Id.* at 31 [*citing FPC v. Hope Natural Gas*, 320 U.S. 591, 602 (1944)].

[2915] *Id.* at 31 [*citing WBEN v. United States*, 396 F.2d 601, 618 (2d Cir.), *cert. denied*, 393 U.S. 914 (1968)].

[2916] *Id.*

[2917] *See GTE California v. FCC*, 39 F.3d 940, 946 (9th Cir. 1994) (*citing Johnson v. Robison*, 415 U.S. 361, 368 (1974)).

owners' poles, that would allow them to recover the cost of providing usable space to each entity and two-thirds of the cost of the unusable space apportioned among such users. The Commission soon will initiate a separate rulemaking proceeding that will give greater content to this statutory standard. GTE and others may present their just compensation arguments with respect to the ratemaking standards the Commission adopts in that proceeding. GTE has not shown here, however, how the statutory standard contained in section 224(e) necessarily would deny pole owners just compensation.

4. Modifications

a. Background

1193. In the NPRM we sought comment on section 224(h) which provides:

> Whenever the owner of a pole, duct, conduit, or right-of-way intends to modify or alter such pole, duct, conduit, or right-of-way, the owner shall provide written notification of such action to any entity that has obtained an attachment to such conduit or right-of-way so that such entity may have a reasonable opportunity to add to or modify its existing attachment. Any entity that adds to or modifies its existing attachment after receiving such notification shall bear a proportionate share of the costs incurred by the owner in making such pole, duct, conduit, or right-of-way accessible.[2918]

1194. The NPRM requested comments addressing the manner and timing of the notice that must be provided to ensure a reasonable opportunity to add to or modify its attachment. In addition, we sought comment regarding the establishment of rules apportioning the cost of a modification among the various users of the modified facility. Finally, we requested comment on whether any payment of costs should be offset by the potential increase in revenues to the owner. If, for example, an owner modifies a pole to allow additional attachments that generate additional fees for the owner, should such revenues offset the share of modification costs borne by entities with preexisting access to the pole?

b. Comments

(1) Manner and Timing of Notice

1195. Several commenters state that no firm notice period should be established, due to the impracticalities of applying a single standard to the wide variety of situations that may necessitate modifications. Ameritech argues that the appropriate manner and timing for notice will vary according to local factors, such as the specific facility, the attachment, and the nature,

[2918] 47 U.S.C. § 224(h).

extent and reason for the change.[2919] According to Ameritech, time frames for responding to circumstances will vary according to the reason for the modification, including modifications due to damage, deterioration, technological improvements, public works projects and demand growth. Given these variables, Ameritech contends that rigid notification rules could impair the facility owner's ability to respond to emergencies, and would unnecessarily complicate and delay expansion, improvement and maintenance of facilities.[2920]

1196. Most of the commenters agree that exceptions to any firm notice requirements should be made for emergency situations, such as storm restoration work, and minor modifications.[2921] Electric utilities argue that written notification requirements must not restrict their ability to respond to emergencies, customer complaints or routine maintenance.[2922] Incumbent LECs echo these suggestions.[2923] Duquesne urges an exception to any specific notice requirement where the utility's database does not show that the attachment exists.[2924] Duquesne contends that telecommunications providers often make attachments without prior notice to the utility. Although the utility will discover the attachment when it goes to service the pole, Duquesne argues it should not have to suspend that service to give notice to a communications provider that attached without notice to the utility. As proposed by Duquesne, this exception would sunset in five years, by which time the utility would be required to have an accurate database.[2925]

1197. Those commenters who propose specific notice periods varied widely with regard to what they deem "reasonable" notice: periods of 10,[2926] 30,[2927] 60,[2928] 90,[2929] and 180[2930] days

[2919] Ameritech comments at 39.

[2920] *Id.; accord,* ConEd comments at 13; NU System Companies comments at 6.

[2921] Ameritech comments at 39; AT&T reply at 20; Bell Atlantic comments at 15; ConEd comments at 13-14; Delmarva comments at 23-24; Duquesne comments at 24-25; MFS comments at 12; NU System Companies comments at 6.

[2922] Public Service Company of New Mexico comments at 27; Virginia Electric comments at 19; Carolina Power reply at 2; American Electric Power reply at 41-43.

[2923] USTA comments at 10; Bell Atlantic comments at 15; SBC reply at 31-32.

[2924] Duquesne comments at 25.

[2925] *Id.*

[2926] AT&T comments at 20; Delmarva comments at 23-24; Duquesne comments at 24.

[2927] PECO comments at 8. PECO also notes that a period exceeding 30 days may be appropriate in the case of particular rights-of-ways, such as ducts, which have special logistical difficulties and greater expenses associated with them. *Id.* at 9.

were recommended, with at least one commenter requesting a full year's notice before modifications could take place.[2931] In justifying the various notice periods and exceptions presented, commenters cite existing notification periods in standard contracts.[2932] They also express concerns that longer periods would interfere with a utility's ability to allocate work crews and schedule necessary outages efficiently,[2933] that upgrade schedules could be disrupted if a longer period were mandated,[2934] or that longer periods would be necessary to allow users to determine future business and economic needs.[2935] Teleport recommends that modifications which benefit only some users should not interrupt usage by others.[2936]

1198. A number of commenters express a preference for negotiated notification terms.[2937] For example, BellSouth currently negotiates contractual notice provisions with attaching communications providers and expresses concern that these contracts may have to be re-negotiated should rigid notice periods be established.[2938] BellSouth also has online notification programs, which it argues should be recognized as meeting any written notification obligations.[2939] Similarly, NEES points out that a group of New England utilities, local exchange carriers, and cable systems are developing a joint electronic information system for all construction-related notifications, and notes that specific notice requirements could reduce the effectiveness of such a system.[2940] Bell Atlantic argues that any duty of notice should be deemed waived when an

[2928] AT&T comments at 20, and AT&T reply at 20; GST Telecom comments at 7; U S West comments at 19.

[2929] Cole comments at 20; MFS comments at 11; Time Warner comments at 15.

[2930] MCI comments at 25.

[2931] Teleport comments at 10.

[2932] Cole comments at 20.

[2933] PECO comments at 8; USTA comments at 10, reply at 9.

[2934] PECO comments at 8.

[2935] Teleport comments at 10.

[2936] *Id.*

[2937] *See, e.g.,* Bell Atlantic comments at 15; GTE comments at 27; Illinois Commission Comments at 72-73; NEES comments at 15-16; PacTel comments at 18; USTA reply at 9.

[2938] BellSouth comments at 17-18.

[2939] *Id.,* at 18 n.39.

[2940] NEES comments at 16.

attachment contract grants the utility modification power as needed.[2941]

(2) Allocation of Costs

1199. Several commenters argue that the circumstances surrounding modifications will vary so greatly that uniform application of a single cost allocation formula is infeasible.[2942] Others propose a variety of cost allocation formulas, including dividing the total cost of the modification by the number of entities modifying their attachments,[2943] tying an entity's share of modification costs to the share of space reserved on the pole for that entity's use,[2944] and applying a total service long-run incremental cost methodology based on proportionate space used by each carrier.[2945] One commenter suggests that costs of modifications should be shared only when the user requests the modification, in which case the user would pay a *pro rata* share of the cost.[2946]

1200. AT&T contends that, while the attacher should pay the cost of the addition, if the addition involves more capacity than is needed by existing users, then the owner should pay the balance, subject to recovery later when other entities seek attachments.[2947] According to AT&T, attachers should not pay the cost of modifications by owner, but should only pay their share of the costs to make the structure accessible.[2948] AT&T adds that owners should not be allowed to charge new attachers for modifications paid for by existing attachers.[2949] PECO argues that if the utility has decided to replace a 50-foot pole with a 55-foot pole, an attaching party should not be permitted to request a 60-foot pole unless the requesting party intended to make a modification necessitating the 60-foot pole within six months. According to PECO, the requesting party should be permitted to reserve space in this manner only if it was willing to cover maintenance,

[2941] Bell Atlantic comments at 15.

[2942] Ameritech comments at 39-40; GTE comments at 28; USTA comments at 11; U S West comments at 20.

[2943] Bell Atlantic comments at 16; Delmarva comments at 24-25; Duquesne comments at 26. Duquesne also contends that section 224(e)(1) dictates that any such rule should apply to a party's "proportionate costs" only if the parties are unable to resolve a dispute over such charges. *Id.*

[2944] AT&T comments at 21, reply at 22; MCI comments at 25; USTA comments at 11.

[2945] MCI comments at 24.

[2946] Teleport comments at 11.

[2947] AT&T comments at 19.

[2948] *Id.*, at 21.

[2949] AT&T reply at 22.

insurance, and other operational costs associated with the reserved space.[2950]

1201. Cole observes that an applicant must pay for the make-ready needed to accommodate its own attachments. This would include the cost to pre-existing users to transfer their lines to new locations on the pole, or to install a new pole if such a pole is necessary to accommodate the new attachment.[2951] Cole argues that the new user should be protected from having to pay for preexisting NESC violations that are corrected at the same time the new attachment is made.[2952] In addition, reading sections 224(h) and (i) together,[2953] Cole concludes that, if a change out is required to correct a pre-existing utility violation on the pole, the utility must bear the cost of the change out, and should also be solely responsible for change out costs if the change out is attributable solely to the needs of the utility, such as an increase in the load carried by the utility. Under this approach, if a change out is necessitated by something other than the needs of an entity that already has, or seeks to have, an attachment, then entities with existing attachments must be given an opportunity to maintain or modify their attachments, with each party bearing their own costs. As an example, all attaching parties would share the cost of a new pole that was needed due to a road widening project.[2954]

1202. A few commenters suggest that cost arrangements currently in place in certain states should be considered as possible solutions to this problem. For example, ConEd recommends adoption of the rule which it says is currently applied in New York and is an accepted practice: "If a utility causes an attachment to be modified within two years of an attachment, then the utility is responsible for the modification. (However, if it is the attaching entity, then the provider would be responsible for these costs.) Then, if a modification is made after two years, the provider is required to pay the costs of the modification."[2955] PacTel currently bills the attacher when it modifies a conduit to facilitate space for that attacher; if the modification is to benefit PacTel, PacTel picks up the whole cost. PacTel requests that this approach, which is currently used in California and Nevada, be recognized as a safe harbor under the 1996 Act.[2956] The NU System Companies contend that costs should be borne equally by all parties that have existing attachments on the facility, claiming that this method has generally been

[2950] *Id.*

[2951] Cole comments at 18.

[2952] *Id.; accord,* Summit comments at 1.

[2953] Note that section 224 (i) was not the subject of the *Notice*.

[2954] Cole comments at 19.

[2955] ConEd comments at 14.

[2956] PacTel comments at 22.

used among electric and telephone companies in its territories.[2957]

1203. Measuring modification costs poses a separate concern. Electric utilities, for example, contend that modification costs incurred to accommodate an attaching entity impose long-term costs beyond the initial cost of modification. Utilities have argued that the presence of attachments adds to the cost of maintaining and modifying the facility. One commenter suggests that modifications to increase pole height to accommodate attaching parties could impose on utilities additional costs of new trucks to service the pole.[2958] According to this commenter, unless attaching parties cover these added costs, utility owners will be subsidizing attaching parties on a continuous basis.[2959] At the same time, some commenters suggest that facility owners may engage in unnecessary or unduly burdensome modifications, imposing costs that could discourage new entrants from offering telecommunications services.[2960] Other commenters contend that normal market forces will prevent facility owners from making such modifications.[2961]

1204. Delmarva contends that it will be difficult, if not impossible, for the Commission to establish a rule that fairly defines what modifications are "unnecessary or unduly burdensome." Similarly, the NU System Companies argue that limitations on an owner's right to modify a facility and on "unnecessary or unduly burdensome modifications" would potentially and directly interfere with crucial day-to-day utility operations. They further argues that applicable codes, state laws and company standards will generally dictate when and where modifications are needed, and it would be impractical to suggest a "limitation" or standard that could be applied in all cases.[2962] A number of commenters note that if a utility seeks to modify a facility and the attaching carrier will not benefit from the modification, the attaching entity bears none of the costs associated with the modification. Given the large costs associated with such arrangements, this allocation of rearrangement costs will preclude utilities from making any "unnecessary or unduly burdensome" modifications, according to these commenters.[2963]

[2957] NU System Companies comments at 6-7.

[2958] UTC comments at 18.

[2959] *Id.*; *see* Puget Sound comments at 5-6.

[2960] WinStar comments at 8; Teleport comments at 10; GST Telecom comments at 8; NCTA reply at 7-8.

[2961] *See, e.g.*, Bell Atlantic comments at 15, Public Service Company of New Mexico reply at 18-19.

[2962] NU System Companies comments at 7.

[2963] Delmarva comments at 26-27; *accord* Duquesne comments at 28.

1205. Some commenters supported,[2964] while many opposed,[2965] our proposal to require facility owners to offset modification costs with additional revenues from new attachments made possible by those modifications. Several of those opposed to offsetting note that pole owners modify out of necessity, not to attract additional attachers, and any additional revenues generated by the new capacity added through modifications would be speculative.[2966] One commenter notes that offsetting costs by potential additional revenues would be inconsistent with a scheme that allocates the cost of modifications only to those parties who benefit from such modifications.[2967] ConEd adds that the facility belongs to the utility and it therefore should be permitted to receive any revenues it can from the use of those facilities.[2968]

1206. Cole suggests that regular attachment fees paid over the term of a pole attachment agreement constitute a return on the utility's investment in the pole. Cole contends such fees should be minimal if parties with attachments have contributed to the cost of a new pole. "Otherwise," Cole states, "the utility will be recovering a return and other compensation for an investment which was made in part by its tenants."[2969] In such circumstances, Cole recommends that the ongoing rental fee should be limited to the incremental cost to the utility of the attachment.[2970]

c. Discussion

1207. We recognize that, when a modification is planned, parties with preexisting attachments to a pole or conduit need time to evaluate how the proposed modification affects their interest and whether activity related to the modification presents an opportunity to adjust the attachment in a desirable manner.[2971] At the same time, we also recognize that not all adjustments to utility facilities are alike. Some adjustments may be sufficiently routine or minor as to not create the type of opportunity that triggers the notice requirement.[2972] Indeed, it is possible that in

[2964] AT&T comments at 21; GST Telecom comments at 9.

[2965] ConEd comments at 14; Delmarva comments at 25-26; Duquesne comments at 27; NEES comments at 16.

[2966] Bell Atlantic comments at 16; NU Systems comments at 7; NEES comments at 16; PECO comments at 10.

[2967] Duquesne comments at 27.

[2968] ConEd comments at 14.

[2969] Cole comments at 20.

[2970] *Id.*

[2971] Teleport comments at 10; AT&T reply at 20.

[2972] USTA comments at 10; Bell Atlantic comments at 15; MFS comments at 12; SBC reply at 33.

some cases lengthy notice requirements could delay unnecessarily the kinds of modifications that would expedite the onset of meaningful competition in the provision of telecommunications services.[2973] Although the period of advance notice has varied widely among commenters, we note that 60 days has been advocated by several parties.[2974]

1208. Several commenters expressed a preference for negotiated notification terms.[2975] They have explained that circumstances will vary among owners of facilities.[2976] The time needed to commence a modification could vary according to pole conditions, technological improvements and demand growth.[2977] Attaching parties in rural markets may need more time to study facilities than facility users in urban markets.[2978] To demonstrate their ability to develop appropriate negotiated agreements, some commenters have described notice requirements in existing agreements. Such cases, they contend, illustrate that notification rules are unnecessary.[2979]

1209. We conclude that, absent a private agreement establishing notification procedures, written notification of a modification must be provided to parties holding attachments on the facility to be modified at least 60 days prior to the commencement of the physical modification itself. Notice should be sufficiently specific to apprise the recipient of the nature and scope of the planned modification. These notice requirements should provide small entities with sufficient time to evaluate the impact of or opportunities made possible by the proposed modifications on their interests and plan accordingly.[2980] If the contemplated modification involves an emergency situation for which advanced written notice would prove impractical, the notice requirement does not apply except that notice should be given as soon as reasonably practicable, which in some cases may be after the modification is completed. Further, we believe that the burden of requiring specific written notice of routine maintenance activities would not produce a commensurate benefit. Utilities and parties with attachments should exchange maintenance

[2973] AT&T reply at 20; USTA reply at 9; U S West reply at 8; Massachusetts Electric, *et al.*, reply at 4-5.

[2974] *See, e.g.*, U S West comments at 19; AT&T comments at 20; GST Telecom comments at 7; AT&T reply at 20; Cincinnati Bell reply at 6.

[2975] GTE comments at 28; PacTel comments at 21-22; Rural Tel. Coalition comments at 16; American Electric Power reply at 40; Ohio Edison reply at 23.

[2976] American Electric Power comments at 46.

[2977] Ameritech comments at 39; Municipal Utilities reply at 6-7; Cincinnati Bell reply at 6.

[2978] GVNW comments at 11.

[2979] PacTel comments at 21-22; BellSouth comments at 17-18; American Electric Power reply at 40.

[2980] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

handbooks or other written descriptions of their standard maintenance practices.[2981] Changes to these practices should be made only upon 60 days written notice. Recognizing that the parties themselves are best able to determine the circumstances where notice would be reasonable and sufficient, as well as the types of modifications that should trigger notice obligations, we encourage the owner of a facility and parties with attachments to negotiate acceptable notification terms.

1210. Even with the adoption of a specific notice period, however, we still encourage communication among owners and attaching parties. Indeed, in cases where owners and users routinely share information about upgrades and modifications, agreements regarding notice periods and procedures are ancillary matters.[2982]

1211. With respect to the allocation of modification costs, we conclude that, to the extent the cost of a modification is incurred for the specific benefit of any particular party, the benefiting party will be obligated to assume the cost of the modification, or to bear its proportionate share of cost with all other attaching entities participating in the modification.[2983] If a user's modification affects the attachments of others who do not initiate or request the modification, such as the movement of other attachments as part of a primary modification, the modification cost will be covered by the initiating or requesting party.[2984] Where multiple parties join in the modification, each party's proportionate share of the total cost shall be based on the ratio of the amount of new space occupied by that party to the total amount of new space occupied by all of the parties joining in the modification. For example, a CAP's access request might require the installation of a new pole that is five feet taller than the old pole, even though the CAP needs only two feet of space. At the same time, a cable operator may claim one foot of the newly-created capacity. If these were the only parties participating in the modification, the CAP would pay two-thirds of the modification costs and the cable operator one-third.

1212. As a general approach, requiring that modification costs be paid only by entities for whose benefit the modification is made simplifies the modification process. For these purposes, however, if an entity uses a proposed modification as an opportunity to adjust its preexisting attachment, the "piggybacking" entity should share in the overall cost of the modification to reflect its contribution to the resulting structural change. A utility or other party that uses a modification as an opportunity to bring its facilities into compliance with applicable safety or

[2981] Although we do not offer a definition of "routine maintenance" in this proceeding, we anticipate that the parties to an attachment agreement will have established understandings in this regard. We do not believe that routine maintenance of a facility encompasses actions that would disrupt or impair the service of a facility user.

[2982] Frontier comments at 7.

[2983] NYNEX reply at 8; Carolina Power Reply comments at 3.

[2984] Cole comments at 18; MFS reply at 24.

other requirements will be deemed to be sharing in the modification and will be responsible for its share of the modification cost. This will discourage parties from postponing necessary repairs in an effort to avoid the associated costs.

1213. We recognize that limiting cost burdens to entities that initiate a modification, or piggyback on another's modification, may confer incidental benefits on other parties with preexisting attachments on the newly modified facility. Nevertheless, if a modification would not have occurred absent the action of the initiating party, the cost should not be borne by those that did not take advantage of the opportunity by modifying their own facilities. Indeed, the Conference Report accompanying the passage of the 1996 Act imposes cost sharing obligations on an entity "that takes advantage of such opportunity to modify its own attachments." This suggests that an attaching party, incidentally benefiting from a modification, but not initiating or affirmatively participating in one, should not be responsible for the resulting cost.[2985] As for pole owners themselves, the imposition of cost burdens for modifications they do not initiate could be particularly cumbersome if excess space created by modifications remained unused for extended periods.[2986]

1214. Apart from entities that initiate modifications and preexisting attachers that use the opportunity to modify their own attachments, some entities may seek to add new attachments to the modified facility after the modification is completed to avoid any obligation to share in the cost. If this occurs, the entity initiating and paying for the modification might pay the entire cost of expanding a facility's capacity only to see a new competitor take advantage of the additional capacity without sharing in the cost.[2987] Moreover, entities with preexisting attachments may, due to cost considerations, forgo the opportunity to adjust their attachment only to see a new entrant attach to a pole without sharing the modification cost. To protect the initiators of modifications from absorbing costs that should be shared by others, we will allow the modifying party or parties to recover a proportionate share of the modification costs from parties that later are able to obtain access as a result of the modification. The proportionate share of the subsequent attacher should be reduced to take account of depreciation to the pole or other facility that has occurred since the modification. These provisions are intended to ensure that new entrants, especially small entities with limited resources, bear only their proportionate costs and are not forced to subsidize their later-entering competitors. To the extent small entities avail themselves of this cost-saving mechanism, however, they will incur certain record keeping obligations.[2988]

[2985] GST Telecom comments at 8; MFS comments at 12; NCTA reply at 8.

[2986] Cincinnati Bell reply at 8.

[2987] *See* AT&T comments at 19.

[2988] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

1215. Parties requesting or joining in a modification also will be responsible for resulting costs to maintain the facility on an ongoing basis. We believe determining the method by which to allocate such costs can best be resolved in the context of a proceeding addressing the determination of appropriate rates for pole attachments or other facility uses.[2989] We will postpone consideration of these issues until such time.

1216. We recognize that in some cases a facility modification will create excess capacity that eventually becomes a source of revenue for the facility owner, even though the owner did not share in the costs of the modification.[2990] We do not believe that this requires the owner to use those revenues to compensate the parties that did pay for the modification. Section 224(h) limits responsibility for modification costs to any party that "adds to or modifies its existing attachment after receiving notice" of a proposed modification.[2991] The statute does not give that party any interest in the pole or conduit other than access. Creating a right for that party to share in future revenues from the modification would be tantamount to bestowing an interest that the statute withholds.[2992] Requiring an owner to offset modification costs by the amount of future revenues emanating from the modification expands the category of responsible parties based on factors that Congress did not identify as relevant. Since Congress did not provide for an offset, we will not impose it ourselves. Indeed, a requirement that utilities pass additional attachment fees back to parties with preexisting attachments may be a disincentive to add new competitors to modified facilities, in direct contravention of the general intent of Congress.

5. Dispute Resolution

a. Background

1217. Implementation of the access requirements of sections 224 and 251(b)(4) require the adoption of enforcement procedures. In the NPRM, we sought comment on, among other things, whether to impose upon a utility the burden of justifying its denial of access to its poles, ducts, conduits, and rights-of-way due to lack of capacity, safety, reliability, and engineering issues.[2993]

b. Comments

[2989] BellSouth comments at 18; NYNEX comments at 14; SBC comments at 18.

[2990] AT&T comments at 21; GST Telecom comments at 9; WinStar reply at 8-9.

[2991] 47 U.S.C. § 224(h).

[2992] American Electric Power reply at 46.

[2993] NPRM at para. 223; *see* 47 U.S.C. § 224(f)(2).

1218. With respect to dispute resolution procedures generally, a few commenters note that existing complaint procedure mechanisms have worked well in the cable television pole context and should be adequate in this broader context as well.[2994] Other commenters argue that dispute resolution should be left to the states, with federal intervention only where the states failed to regulate.[2995] Some commenters request that any complaint mechanism established should provide for the expeditious resolution of disputes, with short time frames for responses and final resolution.[2996]

1219. Several commenters argue that, where access has been denied, the party denying access should have the burden of proving that such denial was justified.[2997] Others contend that, historically, cable operators have had the burden of proof in pole attachment cases, and that no principled basis exists for altering historic procedures.[2998] In addition, commenters expressed concern that placing the burden of proof on a utility unfairly presumes bad faith.[2999]

1220. PECO agrees with some cable commenters that the reasonableness of a denial of access should be based on industry safety and operational standards. A restriction on access imposed in accordance with such standards should be irrebuttably presumed reasonable, according to PECO. If the utility seeks to impose stricter standards, the burden would be on the utility to establish the reasonableness of the stricter standard. Predicting the likelihood of fact-intense disputes on such issues, PECO recommends the adoption of adequate dispute-resolution procedures.[3000] Similarly, Cole contends that a utility cannot deny a request for access based upon safety or reliability concerns as long as the applicant is willing to undertake the obligations necessary to comply with NESC standards.[3001] Safety and reliability standards that exceed NESC standards should be presumed unreasonable if they are used to deny access to a pole. The utility

[2994] *See, e.g.*, BellSouth reply at 16-17; GTE reply at 29-30; U S West reply at 8.

[2995] ICC comments at 72-73; Bell Atlantic reply at 10-11; GTE reply at 29-30; PacTel reply at 27.

[2996] *See, e.g.*, Joint Cable commenters at 20-22; NEXTLINK comments at 6-7.

[2997] Delmarva comments at 19; Duquesne comments at 22; Joint Cable commenters at 20-22; NEXTLINK comments at 6-7; OCC reply at 6; PUCO Staff comments at 11-12; Sprint reply at 20.

[2998] ConEd comments at 12; American Electric Power reply at 32-36; BellSouth reply at 16-17; SBC reply at 26-27.

[2999] GTE reply at 26-27; NEES comments at 14.

[3000] PECO comments at 6.

[3001] Cole comments at 16.

would then have the burden of showing the reasonableness of such standards.[3002]

1221. Duquesne argues that it is appropriate for the utility to bear the burden of establishing a threat to reliability if that rationale is used to deny access. Once a utility makes a showing, based on an engineering analysis, that the attachments "quantifiably threaten reliability," the burden would shift to the party seeking the attachment to show that the utility's analysis is incomplete or invalid, with the utility holding the ultimate burden of proof.[3003]

c. Discussion

(1) General Complaint Procedures Under Section 224

1222. Section 224(f)(2) provides that an electric utility may deny non-discriminatory access "where there is insufficient capacity and for reasons of safety, reliability and generally applicable engineering purposes."[3004] We have determined that other utilities also may consider these concerns when faced with an access request.[3005] A denial of access, while proper in some cases, is an exception to the general mandate of section 224(f). We note that utilities contend that they are in the best position to determine when access should be denied, because they possess the information and expertise to make such decisions and because of the varied circumstances impacting these decisions.[3006] We think it appropriate that the utility bear the burden of justifying why its denial of access to a cable television or telecommunications carrier fits within that exception.[3007] We therefore agree that utilities have the ultimate burden of proof in denial-of-access cases.[3008] We believe this will minimize uncertainty and reduce litigation and transaction costs, because new entrants generally, and small entities in particular, are unlikely to have access to the relevant information without cooperation from the utilities.[3009]

[3002] *Id.*, at 17-18.

[3003] Duquesne comments at 22; *accord* Delmarva Comments at 19.

[3004] *See* 47 U.S.C. § 224(f)(2).

[3005] *See supra*, Section B(1)(c)(2).

[3006] *See generally* Comments of American Electric Power; Delmarva Power and Light; NEES; Puget Sound; Public Service Company of New Mexico; UTC; Virginia Power.

[3007] Public Service Company of New Mexico at 20-23; Delmarva Power and Light at 19; Joint Cable commenters at 18; WinStar reply at 7; Sprint reply at 20.

[3008] Comments of Public Service Company of New Mexico at 20-23; Ohio Consumers' Counsel reply at 6; PUCO Staff comments at 12.

[3009] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

1223. We also agree with Virginia Power that a telecommunications carrier or cable television provider filing a complaint with the Commission must establish a prima facie case.[3010] A petitioner's complaint, in addition to showing that it is timely filed, must state the grounds given for the denial of access, the reasons those grounds are unjust or unreasonable, and the remedy sought. The complaint must be supported by the written request for access, the utility's response, and information supporting its position.[3011] The Commission will deny the petitioner's claim if a prima facie case is not established.[3012] A complaint will not be dismissed if a petitioner is unable to obtain a utility's written response, or if a petitioner is denied any other relevant information by the utility needed to establish a prima facie case. Thus, we expect a utility that receives a legitimate inquiry regarding access to its facilities or property to make its maps, plats, and other relevant data available for inspection and copying by the requesting party, subject to reasonable conditions to protect proprietary information.[3013] This provision eliminates the need for costly discovery in pursuing a claim of improper denial of access, allowing attaching parties, including small entities with limited resources, to seek redress of such denials.[3014]

1224. We agree with the Joint Cable Commenters that "time is of the essence."[3015] The Joint Cable Commenters contend that the Commission should implement an expedited review process for denial of access cases.[3016] By implementing specific complaint procedures for denial of access cases, we seek to establish swift and specific enforcement procedures that will allow for competition where access can be provided.[3017] In order to provide a complete record, written requests for access must be provided to the utility. If access is not granted within 45 days of the request, the utility must confirm the denial in writing by the 45th day. Although these written requirements involve some recordkeeping obligations, which could impose a burden on small incumbent LECs and small entities, we believe that burden is outweighed by the benefits of

[3010] Virginia Power comments at 14; American Electric Power comments at 40-42; Carolina Power and Light comments at 5 (*citing* 47 C.F.R. § 1.1409(b)); *see also* SBC comments at 15-17.

[3011] Virginia Power comments at 15 (*citing* 47 C.F.R. § 1.1404(f) and (g)).

[3012] 47 C.F.R. § 1.1409(d).

[3013] AT&T comments at 19; GST comments at 6.

[3014] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601, et seq.

[3015] Joint Cable Commenters reply at 24.

[3016] Joint Cable Commenters reply at 25.

[3017] Joint Cable Commenters reply at 24.

certainty and expedient resolution of disputes which this procedure encourages.[3018] The denial must be specific, and include all relevant evidence or information supporting its denial. It must enumerate how the evidence relates to one of the reasons that access can be denied under section 224(f)(2), *i.e.*, lack of capacity, safety, reliability or engineering standards.

1225. For example, a utility may attempt to deny access because of lack of capacity on a 40-foot pole. We would expect a utility to provide the information demonstrating why there is no capacity. In addition, the utility should show why it declined to replace the pole with a 45-foot pole. Upon the receipt of a denial notice from the utility, the requesting party shall have 60 days to file its complaint with the Commission. We anticipate that by following this procedure the Commission will, upon receipt of a complaint, have all relevant information upon which to make its decision. The petition must be served pursuant to section 1.1404(b) of the Commission's rules.[3019] Final decisions relating to access will be resolved by the Commission expeditiously.[3020] Because we are using the expedited process described herein, we do not believe stays or other equitable relief will be granted in the absence of a specific showing, beyond the prima facie case, that such relief is warranted.

(2) Procedures Under Section 251

1226. A telecommunications carrier seeking access to the facilities or property of a LEC may invoke section 251(b)(4) in lieu of, or in addition to, section 244(f)(1). Because section 251(b)(4) mandates access "on rates terms, and conditions that are consistent with section 224," we believe that the section 224 complaint procedures established above should be available regardless of whether a telecommunications provider invokes section 224(f)(1) or section 251(b)(4), or both.

1227. If a telecommunications carrier seeks access to the facilities or property of an incumbent LEC, however, it shall have the option of invoking the procedures established by section 252 in lieu of filing a complaint under section 224. Section 252 governs procedures for the negotiation, arbitration, and approval of certain agreements between incumbent LECs and telecommunications carriers.[3021] In pertinent part, section 252(a)(1) provides:

[3018] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

[3019] 47 C.F.R. § 1.1404(b).

[3020] We note, however, that if the Commission requests additional information from any party, such party will have 5 days to respond to the request. Failure to provide the requested information within the 5 days, will result in a review of the record provided thus far.

[3021] 47 U.S.C. § 252. The requirements of section 252, and the conditions set forth in this section 3(a) of this Order, do not apply if the party seeking access is not a telecommunications carrier, or if the party receiving the request for access is not an incumbent LEC.

> Upon receiving a request for interconnection, services, or network elements pursuant to section 251, an incumbent local exchange carrier may negotiate and enter into a binding agreement with the requesting telecommunications carrier or carriers without regard to the standards set forth in subsections (b) or (c) of section 251.[3022]

1228. Where parties are unable to reach an agreement under this section, any party may petition the relevant state commission to arbitrate the open issues.[3023] In resolving the dispute, the state commission must ensure, among other things, that the ultimate resolution "meet[s] the requirements of section 251, including the regulations prescribed by the Commission pursuant to section 251 . . . . ."[3024] The Commission may assume the state's authority under section 252 if the state "fails to carry out its responsibility" under that section.[3025]

1229. Section 251(c)(1) creates an obligation on the part of an incumbent LEC "to negotiate in good faith in accordance with section 252 the particular terms and conditions of agreements . . . " to fulfill its section 251(b)(4) obligation.[3026] Therefore, a telecommunications carrier may seek access to the facilities or property of an incumbent LEC pursuant to section 251(b)(4) and trigger the negotiation and arbitration procedures of section 252. If a telecommunications carrier intends to invoke the section 252 procedures, it should affirmatively state such intent in its formal request for access to the incumbent LEC. We impose this requirement because the two procedures have separate deadlines by which the parties may or must take certain steps, and therefore the incumbent LEC receiving the request has a need to know which procedure has been invoked. Section 224 shall be the default procedure that will apply if the telecommunications carrier fails to make an affirmative election.

1230. We note that section 252 does not impose any obligations on utilities other than incumbent LECs, and does not grant rights to entities that are not telecommunications providers. Therefore, section 252 may be invoked in lieu of section 224 only by a telecommunications carrier and only if it is seeking access to the facilities or property of an incumbent LEC.

1231. In addition, incumbent LECs cannot use section 251(b)(4) as a means of gaining access to the facilities or property of a LEC. A LEC's obligation under section 251(b)(4) is to afford access "on rates, terms, and conditions that are consistent with section 224." Section 224

[3022] 47 U.S.C. § 251(a).

[3023] 47 U.S.C. § 252(b)(1).

[3024] 47 U.S.C. § 252(c)(1).

[3025] 47 U.S.C. § 252(e)(5).

[3026] 47 U.S.C. § 251(c)(1).

does not prescribe rates, terms, or conditions governing access by an incumbent LEC to the facilities or rights-of-way of a competing LEC. Indeed, section 224 does not provide access rights to incumbent LECs. We cannot infer that section 251(b)(4) restores to an incumbent LEC access rights expressly withheld by section 224. We give deference to the specific denial of access under section 224 over the more general access provisions of section 251(b)(4). Accordingly, no incumbent LEC may seek access to the facilities or rights-of-way of a LEC or any utility under either section 224 or section 251(b)(4).

6. Reverse preemption

a. Background

1232. Even prior to enactment of the 1996 Act, section 224(b)(1) gave the Commission jurisdiction to "regulate the rates, terms, and conditions for pole attachments . . . ."[3027] Under former section 224(c)(1), that jurisdiction was preempted where a state regulated such matters. Such reverse preemption was conditioned upon the state following a certification procedure and meeting certain compliance requirements set forth in sections 224(c)(2) and (3). The 1996 Act expanded the Commission's jurisdiction to include not just rates, terms, and conditions, but also the authority to regulate non-discriminatory access to poles, ducts, conduits and rights-of-way under section 224(f).[3028] At the same time, the 1996 Act expanded the preemptive authority of states to match the expanded scope of the Commission's jurisdiction. section 224(c)(1) now provides:

> Nothing in this section shall be construed to apply to, or to give the Commission jurisdiction with respect to rates, terms and conditions, or access to poles, ducts, conduits, and rights-of-way as provided in subsection (f), for pole attachments in any case where such matters are regulated by the State.[3029]

b. Comments

1233. Cole contends that the nondiscriminatory access provisions of section 224 and our jurisdiction thereunder survive when a telecommunications provider seeks access to the facilities or property of a LEC under section 251(b)(4), even where such matters are regulated by a

[3027] 47 U.S.C. § 224(b)(1).

[3028] 47 U.S.C. § 224(f).

[3029] 47 U.S.C. § 224(c)(1).

state.[3030] Cole notes that section 251(b)(4) requires LECs to afford access to its facilities and rights-of-way to competing telecommunications carriers "on rates, terms, and conditions that are consistent with section 224," with no reference to the possibility of state regulation.[3031] Cole further cites the competitive checklist of section 271 which requires an RBOC to provide such access "in accordance with the requirements of section 224," but which does not provide for state regulation of access.[3032] Cole argues that neither section 251 nor section 271 exempts a LEC or BOC from the access requirements of section 224 where the state has undertaken regulation of such matters. Cole argues that allowing states to preempt federal authority "would defeat the purpose of the Act to promote access" to local facilities.[3033]

1234. Similarly, Nextlink contends that the Commission's access requirements should apply to any LEC that receives an access request under section 251(b)(4), regardless of whether a state has attempted to assert jurisdiction under section 224(c).[3034] Nextlink describes section 251 as "an entirely separate section providing entirely different bases for Commission jurisdiction."[3035]

1235. Other commenters argue that a request for access under section 251(b)(4) always implicates section 224, including the provisions of section 224(c)(1) that allow the states to preempt federal regulation.[3036] The District of Columbia Commission argues that section 251(b)(4) only requires that access be given "'on rates, terms and conditions that are consistent with section 224.'"[3037] Thus, this commenter asserts that any federal regulation of access under section 251(b)(4) is subject to the state's authority under section 224(c)(1).[3038] Bell Atlantic agrees, arguing that the only obligation of section 251(b)(4) is to provide access consistent with section 224 and that providing access in accordance with a valid scheme of state access regulations meets this requirement, regardless of any federal access requirements that otherwise

[3030] Cole reply at 26-27.

[3031] 47 U.S.C. § 251(b)(4); *see* Cole comments at 26-27.

[3032] 47 U.S.C. § 271(c)(2)(b)(iii); *see* Cole comments at 27.

[3033] Cole reply at 27.

[3034] Nextlink reply at 5.

[3035] *Id.*

[3036] Ameritech comments at 33; NYNEX comments at 11-12; USTA reply at 7.

[3037] District of Columbia Commission comments at 9, *quoting* 47 U.S.C. § 251(b)(4).

[3038] *Id.*

would apply.[3039] UTC states that "the statute clearly gives the states authority to establish access requirements if they elect to assert jurisdiction."[3040]

c. Discussion

1236. To resolve this issue, we will begin with access requests that can arise solely under section 224(f)(1). These circumstances include when a cable system or telecommunications carrier seeks access to the facilities or rights-of-way of a non-LEC utility. In such cases, the expansion of the Commission's authority to require utilities to provide nondiscriminatory access under section 224(f) is countered by a corresponding expansion in the scope of a state's authority under section 224(c)(1) to preempt federal requirements. The authority of a state under section 224(c)(1) to preempt federal regulation in these cases is clear.[3041]

1237. The issue becomes more complicated when a telecommunications carrier seeks access to LEC facilities or property under section 251(b)(4). By its express terms, section 251(b)(4) imposes upon LECs, "[t]he duty to afford access to the poles, ducts, conduits, and rights-of-way of such a carrier to competing providers of telecommunications services on rates, terms and conditions that are consistent with section 224."[3042] We believe the reference in section 251(b)(4) to section 224 incorporates all aspects of the latter section, including the state preemption authority of section 224(c)(1). This interpretation is consistent not only with the plain meaning of the statute but with the overall application of sections 251 and 252.

1238. In the 1996 Act, Congress expanded section 224(c)(1) to reach access issues. Congress' clear grant of authority to the states to preempt federal regulation in these cases undercuts the suggestion that Congress sought to establish federal access regulations of universal applicability. Moreover, we do not find it significant that the access provisions of sections 251 and 271 contain no specific reference to the preemptive authority of states under section 224(c)(1), since both provisions expressly refer to section 224 generally.

1239. Thus, when a state has exercised its preemptive authority under section 224(c)(1), a LEC satisfies its duty under section 251(b)(4) to afford access by complying with the state's regulations. If a state has not exercised such preemptive authority, the LEC must comply with the

[3039] Bell Atlantic comments at 12.

[3040] UTC reply at 29.

[3041] As in other circumstances, and subject to certain limitations, the Commission may preempt an otherwise valid state or local access requirement that "prohibit[s] or ha[s] the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunication service." 47 U.S.C. § 253(a).

[3042] 47 U.S.C. § 254(b)(1)(4).

federal rules. Similarly, when a telecommunications carrier seeks access rights from an incumbent LEC by choosing to avail itself of the negotiation and arbitration procedures established in section 252, a state that has exercised its preemption rights will apply its own set of regulations in the arbitration process pursuant to section 252 (c)(1). Finally, we note that state regulation in this area is subject to the provisions of section 253.

1240. We note that Congress did not amend sections 224(c)(2) to prescribe a certification procedure with respect to access (as distinct from the rates, terms, and conditions of access). Therefore, upon the filing of an access complaint with the Commission, the defending party or the state itself should come forward to apprise us whether the state is regulating such matters.[3043] If so, we shall dismiss the complaint without prejudice to it being brought in the appropriate state forum. A party seeking to show that a state regulates access issues should cite to state laws and regulations governing access and establishing a procedure for resolving access complaints in a state forum. Especially probative will be a requirement that the relevant state authority resolve an access complaint within a set period of time following the filing of the complaint.[3044]

C. IMPOSING ADDITIONAL OBLIGATIONS ON LECS

1. Background

1241. Section 251(c) imposes obligations on incumbent LECs in addition to the obligations set forth in sections 251(a) and (b). It establishes obligations of incumbent LECs regarding: (1) good faith negotiation; (2) interconnection; (3) unbundling network elements; (4) resale; (5) providing notice of network changes; and (6) collocation.

1242. Section 251(h)(1) defines an incumbent LEC as a LEC within a particular service area that: (1) as of the enactment of the 1996 Act, provided telephone exchange service in such area; and (2) as of the enactment of the 1996 Act, was deemed to be a member of the exchange carrier association pursuant to 47 C.F.R. § 69.601(b) or, on or after the enactment of the 1996 Act, became a successor or assign of such carrier. Section 252(h)(2) provides that, "[t]he Commission may, by rule, provide for the treatment of a local exchange carrier (or class or category thereof) as an incumbent local exchange carrier for purposes of this section if (A) such carrier occupies a position in the market for telephone exchange service within an area that is comparable to the position occupied by a carrier described in paragraph (1); (B) such carrier has substantially replaced an incumbent local exchange carrier described in paragraph (1); and (C) such treatment is consistent with the public interest, convenience, and necessity and the purposes

[3043] Our rules require service of a pole attachment complaint on both the defending utility and the state. 47 C.F.R. § 1.1404(b).

[3044] *See* 47 U.S.C. § 224(c)(3) (establishing deadlines for states to take final action on complaints concerning the rates, terms, or conditions of access).

of this section."[3045]

1243. In the NPRM, we sought comment on whether we should establish at this time standards and procedures by which interested parties could prove that a particular LEC should be treated as an incumbent LEC. We also sought comment on whether carriers that are not deemed to be incumbent LECs under section 251(h) may be required to comply with any or all of the obligations that apply to incumbent LECs, and whether states may impose on non-incumbent LECs the obligations that are imposed on incumbent LECs under section 251(c).[3046]

2. Comments

1244. Most parties that commented on the issue contend that the Commission should not establish in this proceeding standards and procedures for determining whether a LEC should be treated as an incumbent LEC.[3047]

1245. Many incumbent LECs and state commissions contend that it is not inconsistent with the Act for states to impose the requirements in section 251(c) on carriers that do not fall within the 1996 Act's definition of incumbent. These parties note that sections 251(d)(3), 252(e)(3), and 253(b) permit states to impose additional requirements on carriers.[3048] State commissions allege that they are in the best position to determine when it is appropriate to impose particular obligations on new entrants.[3049] These parties contend that state imposition of reciprocal obligations would be equitable,[3050] and would help promote fair negotiation and realistic demands by the new entrants.[3051]

[3045] 47 U.S.C. § 252(h)(2).

[3046] NPRM at paras. 44-45.

[3047] BellSouth comments at 10; NCTA comments at 15 n.46; Sprint comments at 10; Time Warner comments at 14; *contra* PacTel comments at 16.

[3048] *See, e.g.*, BellSouth comments at 10; California Commission comments at 12; Illinois Commission comments at 19-20 (it is not inconsistent with the Act for states to impose additional obligations on non-incumbents, although it would not be permissible for FCC to do so); Ohio Commission comments at 21-22; PacTel comments at 16; Pennsylvania Commission comments at 19.

[3049] *See, e.g.*, District of Columbia Commission comments at 14.

[3050] *See, e.g.*, Colorado Commission comments at 14-15; MECA comments at 18; Municipal Utilities comments at 10-12 (reciprocal obligations should be permitted as long as they are allowed under state law and city charter); Ohio Consumers' Counsel comments at 5-6 (the loop is a bottleneck regardless of whether the provider is an incumbent or a new entrant); Ohio Commission reply at 8.

[3051] *See, e.g.*, MCI comments at 16, 20; New Jersey Commission at 1.

1246. Potential local competitors argue that states may not impose any of the requirements of section 251(c) on non-incumbent LECs.[3052] These parties contend that the 1996 Act specifically imposes different, and additional obligations on incumbent carriers.[3053] In addition, these parties contend that imposing the same regulatory obligations on non-incumbents is unnecessary because they lack market power,[3054] and is contrary to Congress's desire to facilitate new entry into the local telephone market.[3055] In addition, they assert that section 251(h)(2), which gives the FCC authority to determine when to treat additional carriers as incumbent LECs, would be meaningless if states could decide on their own to subject any LEC to obligations imposed by section 251(c) on incumbent LECs.[3056] Some parties assert that states already impose reciprocal obligations on new entrants, or require them to comply with requirements the 1996 Act only imposes on incumbent LECs.[3057]

3. Discussion

1247. We conclude that allowing states to impose on non-incumbent LECs obligations that the 1996 Act designates as "Additional Obligations on Incumbent Local Exchange Carriers," distinct from obligations on all LECs,[3058] would be inconsistent with the statute.[3059] Some parties

[3052] *See, e.g.*, MCI comments at 5 n.7; MFS comments at 10; TCI comments at 14.

[3053] *See, e.g.*, ACTA comments at 5; Comcast comments at 17; Sprint comments at 10; Cox reply at 41; ICTA reply at 5.

[3054] *See, e.g.*, Comcast comments at 15-16; DoJ comments at 7 (absent a showing of market power, there is no basis for imposing additional obligations on new entrants); MCI comments at 5 n.7; Cox reply at 40; Time Warner reply at 11.

[3055] *See, e.g.*, Continental comments at 18; Metricom comments at 2 (imposing such requirements on non-dominant carriers would hinder competition); NEXTLINK comments at 15-16 (for states to impose additional obligations on non-incumbent LECs could constitute a barrier to entry in violation of section 253); Cox reply at 41; ICTA reply at 6 (imposing 251(c) requirements on new entrants would raise costs and thereby discourage potential competitors from entering the local market).

[3056] *See, e.g.*, GST comments at 3-4; MFS comments at 10; Time Warner comments at 15 (fact that Congress authorizes the FCC (but not state commissions) to impose incumbent obligations on the FCC suggests that Congress did not intend to give states that authority); TCI reply at 12; Teleport reply at 36.

[3057] TCI comments at 14 n.23; *see also* Colorado Commission comments at 11-12 (stating that it exempts new entrants from certain rules for a period of three years, after which the new entrant must demonstrate the continued need for such exemption); Illinois Commission comments at 19 (stating that it imposes intraLATA presubscription and line-side interconnection obligations on new entrants for policy reasons).

[3058] *Compare* 47 U.S.C. §§ 251(b) and 251(c).

assert that certain provisions of the 1996 Act, such as sections 252(e)(3) and 253(b), explicitly permit states to impose additional obligations. Such additional obligations, however, must be consistent with the language and purposes of the 1996 Act.

1248. Section 251(h)(2) sets forth a process by which the FCC may decide to treat LECs as incumbent LECs. Thus, when the conditions set forth in section 251(h)(2) are met, the 1996 Act contemplates that new entrants will be subject to the same obligations imposed on incumbents. While we find that states may not unilaterally impose on non-incumbent LECs obligations the 1996 Act expressly imposes only on incumbent LECs, we find that state commissions or other interested parties could ask the FCC to classify a carrier as an incumbent LEC pursuant to section 251(h)(2). At this time, we decline to adopt specific procedures or standards for determining whether a LEC should be treated as an incumbent LEC. Instead, we will permit interested parties to ask the FCC to issue an order declaring a particular LEC or a class or category of LECs to be treated as incumbent LECs. We expect to give particular consideration to filings from state commissions. We further anticipate that we will not impose incumbent LEC obligations on non-incumbent LECs absent a clear and convincing showing that the LEC occupies a position in the telephone exchange market comparable to the position held by an incumbent LEC, has substantially replaced an incumbent LEC, and that such treatment would serve the public interest, convenience, and necessity and the purposes of section 251.[3060]

[3059] We understand that some states may be imposing on non-incumbent LECs obligations set forth in section 251(c). *See, e.g.*, Colorado Commission comments at 11-12; Draft Decision, State of Connecticut Department of Public Utility Control, Docket No. 94-10-04 at 60, 65 (Connecticut Commission July 11, 1996); Illinois Commission comments at 19. We believe that these actions may be inconsistent with the 1996 Act.

[3060] 47 U.S.C. § 251(h)(2).

XII. EXEMPTIONS, SUSPENSIONS, AND MODIFICATIONS OF SECTION 251 REQUIREMENTS

A. BACKGROUND

1249. Section 251(f)(1) grants rural telephone companies an exemption from section 251(c), until the rural telephone company has received a bona fide request for interconnection, services, or network elements, and the state commission determines that the exemption should be terminated.[3061] Section 251(f)(2) allows LECs with fewer than two percent of the nation's subscriber lines to petition a state commission for a suspension or modification of any requirements of sections 251(b) and (c). Section 251(f) imposes a duty on state commissions to make determinations under this section, and establishes the criteria and procedures for the state commissions to follow. In the NPRM, we tentatively concluded that state commissions have the sole authority to make determinations under section 251(f). In addition, we sought comment on whether we should issue guidelines to assist state commissions when they make determinations regarding exemptions, suspensions, or modifications under section 251(f).

1250. Although subsections (f)(1) and (f)(2) both address the circumstances under which an incumbent LEC could be relieved of duties otherwise imposed by section 251, subsection 251(f)(2) also applies to non-incumbent LECs. The standard for determining whether to exempt a carrier under subsection 251(f)(1) is different from the standard for determining whether to grant a suspension or modification under subsection (f)(2). Subsection 251(f)(1)(B) requires state commissions to determine that terminating a rural exemption is consistent with the universal service provisions of the 1996 Act.[3062] Subsection 251(f)(2)(A)(i) requires state commissions to grant a suspension or modification if it is necessary to "avoid a significant adverse economic impact on users of telecommunications services generally," and subsection 251(f)(2)(B) requires a suspension or modification to be "consistent with the public interest, convenience, and necessity."[3063] Although we address these two subsections together, we highlight instances in which we believe that differences in statutory language require different treatment by state

[3061] A rural telephone company is defined as a local exchange carrier operating entity to the extent that such entity "(A) provides common carrier service to any local exchange carrier study area that does not include either– (i) any incorporated place of 10,000 inhabitants or more, or any part thereof . . .; or (ii) any territory, incorporated or unincorporated, included in an urbanized area . . .; (B) provides telephone exchange service, including exchange access, to fewer than 50,000 access lines; (C) provides telephone exchange service to any local exchange carrier study area with fewer than 100,000 access lines; or (D) has less than 15 percent of its access lines in communities of more than 50,000 on the date of enactment of the Telecommunications Act of 1996." 47 U.S.C. § 153(37).

[3062] The provision states, "the State commission shall terminate the exemption if the request . . . is consistent with section 254 (other than subsections (b)(7) and (c)(1)(D) thereof)." 47 U.S.C. § 251(f)(1)(B).

[3063] 47 U.S.C. § 251(f)(2).

commissions.

1251. We discuss below issues raised by the commenters, and establish some rules regarding the requirements of section 251(f) that we believe will assist state commissions as they carry out their duties under section 251(f). For the most part, however, we expect that states will interpret the requirements of section 251(f) through rulemaking and adjudicative proceedings. We may in the future initiate a Notice of Proposed Rulemaking on certain additional issues raised by section 251(f) if it appears that further action by the Commission is warranted.

B. NEED FOR NATIONAL RULES

1. Comments

1252. Most state commissions[3064] and some other parties[3065] assert that states should have exclusive responsibility for the guidelines and determinations made under this section. Several commenters contend that any guidelines the Commission might issue would be useless, because generalized national guidelines could not take into account the variations among states and among individual LECs.[3066] For example, the Minnesota Independent Coalition argues that the additional grant of authority to states under section 214(e) confirms that state commissions have the sole authority to make determinations under section 251(f).[3067] A number of small telephone companies and associations of LECs advocate mandatory national rules regarding implementation of section 251(f). They assert that such rules would ensure that states carry out this provision in accordance with congressional intent.[3068] Some commenters favor a middle ground, claiming that non-mandatory guidelines from the Commission would be helpful, but that mandatory requirements would conflict with the Act's delegation to the states to make determinations under

[3064] *See, e.g.*, Alaska Commission comments at 6; Alabama Commission comments at 33-34; California Commission comments at 46; Idaho Commission comments at 14; Illinois Commission comments at 84; Louisiana Commission comments at 22-23; Ohio Commission comments at 80; Oregon Commission comments at 31; Pennsylvania Commission comments at 42; Texas Commission comments at 34; Wyoming Commission comments at 38-39.

[3065] Ad Hoc Telecommunications Users Committee comments at 11; ALLTEL comments at 16; Citizens Utilities comments at 34; Colorado Ind. Tel. Ass'n comments at 5-6; GVNW comments at 42; GTE comments at 80; Home Tel. comments at 1; Illinois Ind. Tel. Ass'n comments at 7; Minnesota Ind. Coalition comments at 14; Ohio Consumers' Counsel reply at 25-26; PacTel comments at 99; Puerto Rico Tel. reply at 16-17; Rural Tel. Coalition comments at 11-15.

[3066] Minnesota Ind. Coalition comments at 14; Western Alliance comments at 7.

[3067] Minnesota Ind. Coalition comments at 14.

[3068] Anchorage Tel.Utility comments at 2-4; Bay Springs, *et al.* comments at 10; Centennial Cellular Corp. comments at 12; Alaska Tel. Ass'n comments at 6; Matanuska Tel. Ass'n comments at 5; USTA comments at 87-93.

section 251(f).[3069]

2. Discussion

1253. We agree with parties, including small incumbent LECs, who argue that determining whether a telephone company is entitled, pursuant to section 251(f), to exemption, suspension, or modification of the requirements of section 251 generally should be left to state commissions.[3070] Requests made pursuant to section 251(f) seek to carve out exceptions to application of the section 251 rules that we are establishing in this proceeding. We find that Congress intended the section 251 requirements, and the Commission's implementing rules thereunder, to apply to all carriers throughout the country, except in the circumstances delineated in the statute. We find convincing assertions that it would be an overwhelming task at this time for the Commission to try to anticipate and establish national rules for determining when our generally-applicable rules should *not* be imposed upon carriers. Therefore, we establish in this Order a very limited set of rules that will assist states in their application of the provisions in section 251(f).

1254. Many parties have proposed varying interpretations of the provisions in section 251(f), and have asked for Commission determination or a statement of agreement. Because it appears that many parties welcome some guidance from the Commission, we briefly set forth our interpretation of certain provisions of section 251(f). Such statements will assist parties and, in particular, state commissions that must make determinations regarding requests for exemption, suspension, and modification.

C. APPLICATION OF SECTION 251(f)

1. Comments

1255. Some commenters urge the Commission to require states to grant exemptions, suspensions, or modifications only on a case-by-case basis, and only to the extent warranted by the particular circumstances. They ask the Commission to prohibit states from granting broad-scale or generalized exemptions, suspensions or modifications.[3071] AT&T argues that, to ensure that states do not allow LECs to avoid the regulatory and policy framework that Congress has mandated, the Commission should clarify that states must narrowly tailor suspensions and

[3069] Kentucky Commission comments at 7; Anchorage Tel. Utility comments at 4. Several parties argue that any federal action should not be mandatory. Ohio Commission comments at 80; Citizens Utilities comments at 33; Colorado Ind. Tel. Ass'n comments at 6; Rural Tel. Coalition reply at 18-19.

[3070] *See, e.g.*, Minnesota Ind. Coalition comments at 14; Rural Tel. Coalition comments at 11.

[3071] *See, e.g.*, Centennial Cellular Corp. comments at 16; NCTA comments at 64; Vanguard reply at 21-22.

modifications to protect against specific, identifiable harm.[3072] Telecommunications Carriers for Competition and GCI argue that section 251(f) allows states to delay imposing the requirements under section 251(b) and (c), but it does not allow states to protect LECs from those requirements indefinitely.[3073] In response, Rural Tel. Coalition and SNET state that, while the term "suspensions" could be interpreted as allowing a time delay in implementation, the addition of the term "modifications" allows states to act more broadly.[3074] SNET favors allowing the states "broad discretion to change the nature of any requirement imposed by subsections (b) and (c)."[3075] USTA argues that states should not be permitted to eliminate all exemptions for all carriers.[3076]

1256. A number of parties allege that the Commission should encourage or require states to establish a legal presumption that the LEC seeking an exemption, suspension, or modification must prove to the state commission that such request is merited under the criteria set forth in section 251(f). AT&T argues that a carrier petitioning for suspension or modification under section 251(f)(2) should be obliged to demonstrate that "the application to it of the [s]ection 251(b) or (c) obligations that are the subject of its petition would inflict substantial harm on the LEC and customers in its territories that would not be inflicted on larger LECs and customers in their territories."[3077] SCBA asserts that the burden should be upon the incumbent LEC, which has strong disincentives to promote competitive entry.[3078] Local exchange carriers contend, on the other hand, that the party making a request under section 251(b) or (c) should have to prove that an exemption, suspension, or modification is not justified. For example, TCA, Inc. argues that, because of the high cost of providing telephone service in rural areas, competing carriers should be required to prove that competition will benefit a given rural area.[3079] Bay Springs, *et al.* and Bogue, Kansas argue that rural carriers should benefit from a presumption that they continue to qualify for the exemption in section 251(f)(1).[3080] SNET suggests that, if a LEC makes a *prima*

[3072] AT&T comments at 90-93; *accord* Ohio Consumers' Counsel reply at 26.

[3073] GCI comments at 16-19; TCC comments at 51-53, reply at 28.

[3074] Rural Tel. Coalition reply at 19-20; SNET comments at 36-37.

[3075] SNET comments at 36-37.

[3076] USTA comments at 87; Continental comments at 17 (citing actions of New Hampshire and Connecticut Commissions); Rural Tel. Coalition reply at 25.

[3077] AT&T comments at 92-93; *contra* Cincinnati Bell reply at 14; PacTel reply at 41; SNET reply at 8; USTA reply at 35-36.

[3078] SCBA comments at 17.

[3079] TCA comments at 10.

[3080] Bay Springs, *et al.* comments at 11; Bogue, Kansas comments at 8; *contra* Classic Tel. reply at 9.

facie case in its petition for suspension or modification, the state should automatically grant a temporary suspension of section 251(b) and (c) obligations, as allowed by section 251(f)(2).[3081]

1257. USTA, some rural LECs, and several other parties advocate that the Commission clarify what constitutes a bona fide request under section 251(f)(1).[3082] USTA recommends that a bona fide request must include, at a minimum: (1) a request for service to begin within one year from the date of the request, with a minimum one-year service period; (2) identification of the points where interconnection is sought, specification of network components and quantities needed, and the date when interconnection is desired; and (3) an indication that the requesting carrier is willing to agree to pay charges sufficient to compensate the LEC for all costs incurred in fulfilling the terms of the interconnection agreement as part of the agreement. USTA also contends that the states should be allowed to mandate longer minimum service periods and require competitive providers to post bonds or submit deposits to ensure that a rural telephone company does not bear the cost of interconnection.[3083] Anchorage Telephone Utility claims that simply responding to requests for interconnection imposes a tremendous burden and expense on rural telephone companies, and that rural LECs should not have to respond to requests that do not meet minimum criteria.[3084] Several parties state that they do not believe that generalized form letter requests should be considered a bona fide request.[3085]

1258. Other commenters either favor a broader definition of a bona fide request or oppose federal standards entirely.[3086] NCTA and GCI argue that a request for interconnection

[3081] SNET comments at 37; *see also* Anchorage Tel. Utility comments at 3-4; Cincinnati Bell comments at 41-42; USTA comments at 91-93.

[3082] Anchorage Tel. Utility comments at 5; Bay Springs, *et al.* at 10; Bogue, Kansas comments at 7; NECA comments at 12; TDS reply at 5-6; USTA comments at 87-88; *see also* Kentucky Commission comments at 7.

[3083] USTA comments at 87-88; *accord* Anchorage Tel. Utility comments at 6-7 (carriers that ultimately do not order the items identified in a request for interconnection, services, or network elements should be required to reimburse the incumbent LEC for the costs of responding to such request); Matanuska Tel. Ass'n comments at 5.

[3084] Anchorage Tel. Utility comments at 6 (reporting the receipt of two letters "purporting to request interconnection." "One is a 1-page letter that simply asserts a need for interconnection. The other is an 8-page, single-spaced letter that demands detailed technical, operational and cost information on practically every facet of Anchorage Tel. Utility's local exchange service, without providing any indication of what the requesting carrier actually plans, needs or wants"); *accord* NECA reply at 10-11 (any bona fide request standard should permit LECs to recover costs of responding to requests and enable LECs to avoid unnecessary costs in responding to requests); TDS reply at 5-6.

[3085] TDS reply at 5; Anchorage Tel. Utility comments at 6; Rural Tel. Coalition reply at 24-25.

[3086] *See, e.g.*, Louisiana Commission comments at 22-23 (opposing any attempt by the Commission to define a standard for bona fide requests); *see also* Western Alliance comments at 7 n.16.

should be presumed bona fide until a rural telephone company shows that it is not. They object to a bona fide request requirement, such as the one proposed by USTA, that includes burdensome "pre-filing" requirements as a condition for state review under section 251(f).[3087]

1259. Subsection 251(f)(2) applies to LECs "with fewer than 2 percent of the Nation's subscriber lines installed in the aggregate nationwide."[3088] Several parties suggest that the Commission clarify which carriers meet the numerical standard.[3089] AT&T and a number of other parties argue that the 2 percent should be applied at the holding company level in order to ensure that no BOC operating company can apply for a suspension or modification under this subsection.[3090] Some parties further question whether Tier 1 LECs should be allowed to petition for suspension or modification under subsection (f)(2).[3091] Other parties argue that the two percent statutory cut-off is not a loophole and that the statutory standard should not be altered by the Commission to exclude Tier 1 LECs.[3092] PacTel suggests that the standard should be applied at the operating company level because section 251(f)(2) by its terms applies to "local exchange carrier[s]" not local exchange carriers "and their affiliates."[3093]

1260. Some parties recommend that the Commission offer guidance on how to determine whether a request for exemption, modification, or suspension should be granted.[3094] For example, sections 251(f)(1) and (f)(2) both include consideration of "technical feasibility" in deciding whether to grant an exemption, suspension, or modification. Some parties urge the Commission to clarify whether the standard for determining technical feasibility for purposes of section 251(f)

[3087] NCTA comments at 26-27; GCI reply at 17-18; *but see* USTA reply at 37 (disagreeing that its proposal would constitute "pre-filing" requirements).

[3088] 47 U.S.C. § 251(f)(2).

[3089] BellSouth comments at 76; Ohio Consumers' Counsel comments at 47-48.

[3090] AT&T comments at 90-93; Lincoln Tel. reply at 9-10; GCI reply at 17; TCC reply at 28; Ohio Consumers' Counsel argues that this interpretation is sound because section 251(f)(2) discusses the number of lines "in the aggregate nationwide," and individual operating companies do not operate on a nationwide scale. Ohio Consumers' Counsel reply at 26.

[3091] AT&T comments at 92; TLD comments at 6-7; Centennial Cellular Corp. comments at 12-15.

[3092] Alaska Tel. Ass'n comments at 6; Cincinnati Bell comments at 40, reply at 13; Lincoln Tel. comments at 10-11.

[3093] PacTel reply at 40-41.

[3094] *See, e.g.*, NCTA comments at 63-67 (urging a very limited construction of the exemption, suspension and modification provisions); *contra* Western Alliance reply at 7; Rural Tel. Coalition reply at 21-22.

is different than the technical feasibility standard set forth in sections 251(b) and (c).[3095] Sections 251(f)(1) and (f)(2) require the states to consider whether a request is "unduly economically burdensome."[3096] Generally, comments from rural LECs and others contend that smaller LECs cannot afford to hire staff to respond to requests, or expend funds for additional facilities or operational systems without jeopardizing their financial stability.[3097] In contrast, other parties argue that LECs should not be relieved of any duties otherwise imposed by sections 251(b) and (c) merely because they would require the expenditure of funds.[3098]

1261. Some incumbent LECs recommend that carriers that compete with rural LECs should be required to assume some of the universal service obligations of rural carriers.[3099] They argue that, without such safeguards, competing LECs will enter rural markets and take the incumbent LECs' profitable customers. USTA argues that state commissions should be encouraged to grant waivers until universal service issues are resolved.[3100] Commenters also propose varying interpretations of what constitutes "significant adverse impact on users."[3101] USTA proposes that the definition include any request that would cause a LEC to "have difficulty raising sufficient investment capital, and where the remaining customers . . . would likely bear an increase in rates or a reduction in service to cover a shortfall or subsidy to a new entrant."[3102] TLD proposes that the Commission establish a numerical benchmark, for example, that more than 50 percent of the users would suffer a rate increase of at least 20 percent before a request would be considered in violation of subsection (f)(2)(A)(i).[3103]

3. Discussion

[3095] *See, e.g.*, Bay Springs, *et al.* comments at 11; Lincoln Tel. comments at 23-24; SNET comments at 35; USTA comments at 92; Rural Tel. Coalition reply at 22-23.

[3096] 47 U.S.C. § 251(f).

[3097] A number of parties argue that, if smaller and rural LECs cannot recover their total costs, including any required investments and costs associated with developing rate levels and modifying support systems, the request should be deemed unduly economically burdensome. *See, e.g.*, USTA comments at 92; SNET comments at 36; TLD comments at 2; Lincoln Tel. comments at 23-25; TLD comments at 11-13.

[3098] *See, e.g.*, NCTA comments at 64 n.218.

[3099] Bay Springs, *et al.* comments at 12; TLD comments at 5; *accord* NECA comments at 11.

[3100] USTA comments at 91; *but see* NCTA reply at 25-26.

[3101] 47 U.S.C. § 251(f)(2)(A)(i).

[3102] USTA comments at 92.

[3103] TLD comments at 11.

1262. Congress generally intended the requirements in section 251 to apply to carriers across the country, but Congress recognized that in some cases, it might be unfair or inappropriate to apply all of the requirements to smaller or rural telephone companies.[3104] We believe that Congress intended exemption, suspension, or modification of the section 251 requirements to be the exception rather than the rule, and to apply only to the extent, and for the period of time, that policy considerations justify such exemption, suspension, or modification. We believe that Congress did not intend to insulate smaller or rural LECs from competition, and thereby prevent subscribers in those communities from obtaining the benefits of competitive local exchange service. Thus, we believe that, in order to justify continued exemption once a bona fide request has been made, or to justify suspension, or modification of the Commission's section 251 requirements, a LEC must offer evidence that application of those requirements would be likely to cause undue economic burdens beyond the economic burdens typically associated with efficient competitive entry. State commissions will need to decide on a case-by-case basis whether such a showing has been made.

1263. Given the pro-competitive focus of the 1996 Act, we find that rural LECs must prove to the state commission that they should continue to be exempt pursuant to section 251(f)(1) from requirements of section 251(c), once a bona-fide request has been made, and that smaller companies must prove to the state commission, pursuant to section 251(f)(2), that a suspension or modification of requirements of sections 251(b) or (c) should be granted. We conclude that it is appropriate to place the burden of proof on the party seeking relief from otherwise applicable requirements. Moreover, the party seeking exemption, suspension, or modification is in control of the relevant information necessary for the state to make a determination regarding the request. A rural company that falls within section 251(f)(1) is not required to make any showing until it receives a bona fide request for interconnection, services, or network elements. We decline at this time to establish guidelines regarding what constitutes a bona fide request. We also decline in this Report and Order to adopt national rules or guidelines regarding other aspects of section 251(f). For example, we will not rule in this proceeding on the universal service duties of requesting carriers that seek to compete with rural LECs. We may offer guidance on these matters at a later date, if we believe it is necessary and appropriate.

1264. We find that Congress intended section 251(f)(2) only to apply to companies that, at the holding company level, have fewer than two percent of subscriber lines nationwide. This is consistent with the fact that the standard is based on the percent of subscriber lines that a carrier has "*in the aggregate nationwide*."[3105] Moreover, any other interpretation would permit almost any company, including Bell Atlantic, Ameritech, and GTE affiliates, to take advantage of the suspension and modification provisions in section 251(f)(2). Such a conclusion would render the two percent limitation virtually meaningless.

[3104] 47 U.S.C. § 251(f).

[3105] 47 U.S.C. 251(f)(2) (emphasis added).

1265. We note that some parties recommend that, in adopting rules pursuant to section 251, the Commission provide different treatment or impose different obligations on smaller or rural carriers.[3106] We conclude that section 251(f) adequately provides for varying treatment for smaller or rural LECs where such variances are justified in particular instances. We conclude that there is no basis in the record for adopting other special rules, or limiting the application of our rules to smaller or rural LECs.

[3106] For example, the Rural Tel. Coalition argues that interconnection and collocation points should be set in a flexible manner to take into account size and volume differences among carriers. Rural Tel. Coalition comments at 31.

XIII. ADVANCED TELECOMMUNICATIONS CAPABILITIES

1266. Section 706(a) provides that the Commission "shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) by utilizing, in a manner consistent with the public interest, convenience, and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment."[3107] In the NPRM, we sought comment on how we can advance Congress's section 706(a) goal within the context of our implementation of sections 251 and 252.[3108]

1267. A number of parties suggest that rules allowing them to compete effectively and earn a profit in the telecommunications industry would assist the industry in providing telecommunications services to all Americans.[3109] MFS suggests that "all LECs should be required, as a condition of eligibility for universal service subsidies, to meet network modernization standards for rural telephone companies."[3110] Several state commissions indicate that they have already established programs to assist institutions eligible under section 706 in deploying advanced telecommunications services.[3111] The Alliance for Public Technology asserts that section 706 should underlie all of the FCC's proceedings.[3112] Ericsson states that the industry should work with government agencies to promote leading edge technology to ensure that it is introduced on a reasonably timely basis. For example, it contends that "Plug and Play Internet use" will greatly help the public and schools access information, and that advanced technology such as asynchronous transfer mode (ATM), wireless data/video, and AIN will enhance interconnection capabilities of public and private networks.[3113] The Illinois Commission contends that, depending on the pricing standard the Commission adopts for interconnection and access to unbundled elements, and the Commission's interpretation of the prohibition against discrimination, the Commission should adopt special rules for carriers when they provide interconnection or access to unbundled network elements to serve a school, library, or healthcare

[3107] 47 U.S.C. § 706(a).

[3108] NPRM at para. 263.

[3109] Colorado Ind.Tel. Ass'n comments at 6; COMAV comments at 60-61; GVNW comments at 42; Illinois Ind. Tel. Ass'n comments at 7; Louisiana Commission comments at 24-27.

[3110] MFS comments at 88.

[3111] Illinois Commission comments at 85; Louisiana Commission comments at 24-27; Texas Commission comments at 36.

[3112] Alliance for Public Technology reply at 1-5.

[3113] Ericsson comments at 7-8.

provider.[3114]

1268. We decline to adopt rules regarding section 706 in this proceeding. We intend to address issues related to section 706 in a separate proceeding.

[3114] Illinois Commission comments at 86.

XIV. PROVISIONS OF SECTION 252

A. Section 252(e)(5)

1. Background

1269. Section 252(e)(5) directs the Commission to assume responsibility for any proceeding or matter in which the state commission "fails to act to carry out its responsibility" under section 252.[3115] In the NPRM, we asked whether the Commission should establish rules and regulations necessary to carry out our obligation under section 252(e)(5).[3116] In addition, we sought comment on whether in this proceeding we should establish regulations necessary and appropriate to carry out our obligations under section 252(e)(5). In particular, we sought comment on what constitutes notice of failure to act, what procedures, if any, we should establish for parties to notify the Commission, and what are the circumstances under which a state commission should be deemed to have "fail[ed] to act" under section 252(e)(5).[3117]

1270. Section 252(e)(4) provides that, if the state commission does not approve or reject (1) a negotiated agreement within 90 days, or (2) an arbitrated agreement within 30 days, from the time the agreement is submitted by the parties, the agreement shall be "deemed approved."[3118] We sought comment on the relationship between this provision and our obligation to assume responsibility under section 252(e)(5). We also sought comment on whether the Commission, once it assumes the responsibility of the state commission, is bound by all of the laws and standards that would have applied to the state commission, and whether the Commission is authorized to determine whether an agreement is consistent with applicable state law as the state commission would have been under section 252(e)(3).[3119] In addition, we sought comment on whether, once the Commission assumes responsibility under section 252(e)(5), it retains jurisdiction, or whether that matter or proceeding subsequently should be remanded to the state.

1271. Finally, we sought comment on whether we should adopt, in this proceeding, some standards or methods for arbitrating disputes in the event we must conduct an arbitration under section 252(e)(5). We noted some of the benefits and drawbacks of both "final offer" arbitration and open-ended arbitration, and asked for comment on both.

[3115] 47 U.S.C. § 252(e)(5).

[3116] NPRM at ¶ 265.

[3117] NPRM at ¶ 266.

[3118] 47 U.S.C. § 252(e)(4).

[3119] NPRM at ¶ 267.

2. Comments

1272. The majority of the parties that commented on this issue assert that the Commission should establish guidelines under which it will carry out its responsibilities under section section 252(e)(5).[3120] The Illinois Commission, for example, argues that regulations are needed in order to avoid jurisdictional disputes that may arise.[3121] Some parties, on the other hand, argue that it is not critical for the Commission at this time to develop rules governing the arbitration process.[3122] The Pennsylvania Commission, for example, argues that such rules should be adopted in this proceeding only if the Commission perceives a real possibility that it will be asked in the near future to arbitrate an interconnection agreement.[3123]

1273. A broad range of parties comment on what constitutes a "failure to act" and whether the Commission should establish a definition and procedures for interested parties to notify us if a state commission fails to act.[3124] The Illinois Commission, for example, argues that, upon receipt of a petition to mediate or arbitrate, or a BOC statement of generally available terms, the state commission should issue and serve upon the Commission a notice of its intent to act. This will put the Commission and interested parties on notice that the state commission intends to act.[3125] Some state commissions argue that "failure to act" occurs only if the state commission fails to respond to a request for mediation or arbitration, or fails to issue an arbitration decision within nine months after the incumbent LEC receives a request for interconnection under section 252.[3126]

1274. Other parties contend that failure to act should mean that a state commission has

[3120] *See, e.g.*, Jones Intercable comments at 16-18; California Commission comments at 49; Illinois Commission comments at 87; MCI comments at 94-95; BellSouth comments at 78; Cable & Wireless comments at 50-51; Time Warner comments at 104-105; Oregon Commission comments at 4.

[3121] Illinois Commission comments at 87.

[3122] *See, e.g.*, Pennsylvania Commission comments at 42; PacTel comments at 99; Iowa Commission comments at 7; GTE comments at 80-81.

[3123] Pennsylvania Commission comments at 42.

[3124] *See, e.g.*, Illinois Commission comments at 89; District of Columbia comments at 40; Ohio Commission comments at 81-82; Time Warner comments at 106-107; PacTel comments at 99; Jones Intercable comments at 16 (failure to act occurs where a state fails to respond to a request for arbitration or fails to render a decision on time in arbitration).

[3125] Illinois Commission comments at 89.

[3126] District of Columbia Commission comments at 40; Ohio Commission comments at 81-82; *accord* Cable & Wireless comments at 51.

not taken any steps to act upon a request for arbitration, or has not taken any steps to approve an arbitrated agreement within the time set out in section 252(e)(4).[3127] Jones argues that a failure to act occurs where a state fails to respond to a request for arbitration or fails to render a decision on time in the arbitration proceeding.[3128] Ohio Consumers' Counsel contends that failure to carry out a state's responsibility means more than mere inaction, and that, for example, willfully disregarding the standards in section 252(e)(2) for approving or disapproving agreements might also "constitute a failure to act to carry out its responsibility" under section 252.[3129] USTA argues that, where there has been no agreement and the state fails to act, the Commission must step in and, in some instances, the Commission may need to step in to arbitrate or mediate before an agreement has been reached.[3130]

1275. Regarding the relationship between sections 252(e)(5) and 252(e)(4), most commenters assert that, if a state fails to approve a negotiated agreement within 90 days, or an arbitrated agreement within 30 days, the agreement will be deemed approved, and no Commission action is required.[3131] These parties contend that approval or disapproval of negotiated or arbitrated agreements are not reviewable by the Commission, but that aggrieved parties may seek relief in the appropriate federal district court.

1276. A number of commenters believe that it is important that procedures be in place for interested parties to notify the Commission if a state fails to act. These parties argue that notice of failure to act should be in writing, and should contain the relevant factual circumstances including the provision of the statute under which the state allegedly has failed to act.[3132] They contend that notice should be given to allow interested parties and the state adequate time to respond. MCI asserts that existing Commission procedures are adequate. MCI argues that any notice of an alleged state commission failure to act should set forth relevant facts and the

[3127] *See, e.g.*, Oregon Commission comments at 4; California Commission comments at 47; Ohio Consumers' Counsel comments at 49; Texas Commission comments at 36-37.

[3128] Jones Intercable comments at 16.

[3129] Ohio Consumers' Counsel comments at 49; *see also* California Commission comments at 48 (an agreement automatically approved because the state did not act within the specified time frame should not be deemed to be in compliance with state law).

[3130] USTA comments at 93-94.

[3131] *See, e.g.*, USTA comments at 93-94; Illinois Commission comments at 88; BellSouth comments at 79; Jones Intercable comments at 15; Time Warner reply at 106-107; PacTel comments at 99.

[3132] *See, e.g.*, Ohio Commission comments at 81; Ohio Consumers' Counsel comments at 49; Illinois Commission comments at 89-90.

Commission should place the item on public notice.[3133]

1277. A majority of the commenting parties argue that, if the Commission assumes the responsibility of a state commission, it should be bound by laws and standards that would have applied to the state commission.[3134] These parties allege that this approach would produce consistent results, and that Congress did not intend to create another forum with a separate set of rules. Time Warner, on the other hand, argues against the Commission being bound by state law.[3135]

1278. Parties disagree over whether authority would revert back to the states once the Commission assumes a state commission's responsibility. A number of state commissions argue that the Commission does not retain jurisdiction; it only assumes jurisdiction over a particular proceeding or matter but does not substitute for the state commission on an ongoing basis.[3136] The District of Columbia Commission asserts that, at any time, the state should be able to petition the Commission to reconsider its decision to preempt, and such petitions should be granted upon a reasonable assurance the state intends to carry out its obligations.[3137] A number of parties contend that, once the Commission assumes jurisdiction over a proceeding or matter, it should retain jurisdiction.[3138] Teleport, for example, argues that the Commission "should not risk returning jurisdiction to a state that has demonstrated an ineptitude for implementing interconnection agreements."[3139] Pacific Telesis and Cable and Wireless argue that any agreement arbitrated by the Commission must be submitted to the state for approval.[3140]

[3133] MCI comments at 95.

[3134] *See, e.g.*, PacTel comments at 13-14 (if there is any conflict between the Commission's own rules and requirements of that state, the Commission must lay aside its rules and enforce the state's); California Commission comments at 48; Illinois Commission comments at 90; BellSouth comments at 79; Ohio Commission comments at 82; Louisiana Commission comments at 28 (specific questions concerning a state's law could be certified to the state); SBC comments at 105.

[3135] Time Warner comments at 107-108 (the Commission's authority to interpret state law is suspect, and the Commission lacks the resources and expertise to sit as a trier of law in fifty jurisdictions).

[3136] *See, e.g.*, Ohio Commission comments at 81; Louisiana Commission comments at 28; Pennsylvania Commission comments at 43; District of Columbia Commission comments at 40-41; BellSouth comments at 80.

[3137] District of Columbia Commission comments at 40-41.

[3138] *See, e.g.*, Teleport comments at 89; Jones Intercable comments at 17; Time Warner comments at 109; Oregon Commission comments at 5 (failure by the state to act on one agreement should not vest jurisdiction over other agreements or matters).

[3139] Teleport comments at 89.

[3140] PacTel comments at 100; Cable & Wireless comments at 52.

1279. The vast majority of commenters recommend that the Commission adopt standards for arbitrating disputes in the event that it assumes responsibility under section 252(e)(5).[3141] These parties assert that sufficiently detailed rules should ensure fair and expeditious handling of arbitrations. A few of the commenters favor national rules governing state arbitration proceedings.[3142] SCBA, for example, favors national standards requiring state commissions to use abbreviated, lower cost arbitration proceedings for small cable operators.[3143] The majority of commenters, however, argue against national rules that would govern state arbitration proceedings.[3144]

1280. There is also significant disagreement regarding whether final-offer arbitration should be the arbitration model adopted by the Commission in the event the Commission must conduct the arbitration itself. A broad range of parties argue that final offer arbitration would result in reasonable recommendations to the arbitrator.[3145] Vanguard argues that the "final offer" method of arbitration should permit post-offer negotiation by the parties and allow the parties to tailor counter-proposals.[3146] Under this approach, the Commission would permit negotiation to continue after arbitration offers are exchanged in order to promote negotiated settlements.[3147]

1281. Many competitors oppose a "final offer" arbitration standard.[3148] Sprint, for example, argues that "final-offer" arbitration works well when there is a single, narrowly defined issue on the table, but, where there are numerous complex technical and economic issues, confronting the arbitrator with an "either/or" choice leaves insufficient flexibility to achieve a

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[3141] *See, e.g.*, Teleport comments at 85-86; MFS comments at 89-90; CompTel comments at 108; MCI comments at 95-96; Ohio Consumers' Counsel comments at 50; SBC comments at 99; Kentucky Commission comments at 7; Ohio Commission comments at 83; Illinois Commission comments at 91; Timer Warner comments at 109; Jones Intercable comments at 18; Vanguard comments at 35-37; Association of Telemessaging Services International reply at 18.

[3142] *See, e.g.*, Vanguard comments at 35-37; Time Warner comments at 109.

[3143] SCBA comments at 11-12.

[3144] *See, e.g.*, Oregon Commission reply at 11; Ohio Commission comment at 81; NARUC reply at 14; Illinois Commission at 91.

[3145] *See, e.g.*, Teleport comments at 88; USTA comments at 94-95; SBC comments at 103;

[3146] Vanguard comments at 39-40.

[3147] *Id.* at 40.

[3148] *See, e.g.*, MCI comments at 95-96; Sprint reply at 47; Time Warner comments at 111; Competitive Policy Institute reply at 21-22; GCI reply at 5.

result that comports with section 251.[3149] In addition, Sprint asserts that, because arbitration proceedings have a public interest component that sets them apart from mere private disputes, neither party's offer might serve the public interest.[3150] Some parties recommend an "open-ended" arbitration system,[3151] while California is in favor of a hybrid between the two. [3152]

1282. SBC contends that Congress did not intend for arbitration to be binding to the extent that parties are not legally obligated to enter into an agreement after the arbitrator issues a decision.[3153] SBC argues that parties are bound by the arbitrator's decision only if they decide to enter into an agreement. Vanguard responds that SBC's proposal is contrary to the statute, which does not give parties the opportunity to reject the results of arbitration and which does not provide for *de novo* review.[3154]

3. Discussion

1283. After careful review of the record, we are convinced that establishing regulations to carry out our obligations under section 252(e)(5) will provide for an efficient and fair transition from state jurisdiction should we have to assume the responsibility of the state commission under Section 252(e)(5). The rules we establish in this section with respect to arbitration under section 252 apply only to instances where the Commission assumes jurisdiction under section 252(e)(5); we do not purport to advise states on how to conduct arbitration when the Commission has not assumed jurisdiction. The rules we establish will give notice of the procedures and standards the Commission would apply to mediation and arbitration, avoid delay if the Commission had to arbitrate disputes in the near future, and may also offer guidance the states may, at their discretion, wish to consider in implementing their own mediation and arbitration procedures and standards. We decline to adopt national rules governing state arbitration procedures. We believe the states are in a better position to develop mediation and arbitration rules that support the objectives of the 1996 Act. States may develop specific measures that address the concerns of

[3149] Sprint reply at 47.

[3150] *Id.*

[3151] *See, e.g.*, Time Warner comments at 111.

[3152] California Commission comments at 50. The California Commission's procedures for resolving interconnection disputes is based on a four-step expedited dispute resolution process for resolving disputes between parties who cannot agree on the terms of interconnection. Step 1 is informal resolution without state intervention. Step 2 provides for dispute resolution with mediation by the Administrative Law Judge (ALJ). Step 3 calls for the parties to submit short pleadings to the ALJ who shall use the state commission's "preferred outcomes" approach as a guideline in resolving dispute. Step 4 allows for a party to challenge an ALJ ruling by filing an expedited complaint.

[3153] SBC comments at 99.

[3154] Vanguard reply at 18-20; *accord* Competition Policy Institute reply at 18-19.

small entities and small incumbent LECs participating in mediation or arbitration.

1284. The rules we adopt herein are minimum, interim procedures. Adopting minimum interim procedures now will allow the Commission to learn from the initial experiences and gain a better understanding of what types of situations may arise that require Commission action. We note that the Commission is not required to adopt procedures and standards for mediation and arbitration within the six-month statutory deadline and that, by adopting minimum interim procedures, the Commission can better direct its resources to more pressing matters that fall within the six-month statutory deadline.

1285. Regarding what constitutes a state's "failure to act to carry out its responsibility under" section 252,[3155] the Commission was presented with numerous options. The Commission will not take an expansive view of what constitutes a state's "failure to act." Instead, the Commission interprets "failure to act" to mean a state's failure to complete its duties in a timely manner. This would limit Commission action to instances where a state commission fails to respond, within a reasonable time, to a request for mediation or arbitration, or fails to complete arbitration within the time limits of section 252(b)(4)(C).[3156] The Commission will place the burden of proof on parties alleging that the state commission has failed to respond to a request for mediation or arbitration within a reasonable time frame. We note the work done by states to date in putting in place procedures and regulations governing arbitration and believe that states will meet their responsibilities and obligations under the 1996 Act.[3157]

1286. We agree with the majority of commenters that argue that our authority to assume the state commission's responsibilities is not triggered when an agreement is "deemed approved" under section 252(e)(4) due to state commission inaction. Section 252(e)(4) provides for automatic approval if a state fails to approve or reject a negotiated or arbitrated agreement within 90 days or 30 days, respectively. Rules of statutory construction require us to give meaning to all provisions and to read provisions consistently, where it is possible to do so. We thus conclude that the most reasonable interpretation is that automatic approval under section 252(e)(4) does not constitute a failure to act.

1287. We also believe that we should establish interim procedures for interested parties to notify the Commission that a state commission has failed to act under section 252. We believe that parties should be required to file a detailed written petition, backed by affidavit, that will, at

[3155] 47 U.S.C. § 252(e)(5).

[3156] 47 U.S.C. § 252(b)(4)(C).

[3157] *See, e.g., In the Matter of the Implementation of the Mediation and Arbitration Provisions of the Federal Telecommunications Act of 1996*, Case No. 96-463-TP-UNC, Ohio Commission, (May 30, 1996); *Illinois Commerce Commission On Its Own Motion Adoption of 83 Ill. Adm. Code 761 to Implement the Arbitration Provisions of Section 252 of the Telecommunications Act of 1996*, Docket No. 96-0297, Illinois Commission (June 14, 1996).

the outset, give the Commission a better understanding of the issues involved and the action, or lack of action, taken by the state commission. Allowing less detailed notification increases the likelihood that frivolous requests will be made. With less detailed notification, the Commission's investigations would be broader and more burdensome. A detailed written petition will facilitate a decision about whether the Commission should assume jurisdiction based on section 252(e)(5).

1288. The moving party should submit a petition to the Secretary of the Commission stating with specificity the basis for the petition and any information that supports the claim that the state has failed to act, including, but not limited to the applicable provision(s) of the Act and the factual circumstances which support a finding that a state has failed to act. The moving party must ensure that the applicable state commission and the parties to the proceeding or matter for which preemption is sought are served with the petition on the same date the party serves the petition on the Commission. The petition will serve as notice to parties to the state proceeding and the state commission who will have fifteen days from the date the petition is filed with the Commission to comment. Under section 252(e)(5), the Commission must "issue an order preempting the state commission's jurisdiction of that proceeding or matter" no later than 90 days from the date the petition is filed.[3158] If the Commission takes notice, as section 252(e)(5) permits, that a state commission has failed to act, it will, on its own motion, issue a public notice and provide fifteen days for interested parties to submit comment on whether the Commission should assume responsibility under section 252(e)(5).

1289. If the Commission assumes authority under section 252(e)(5), the Commission must also decide whether it retains authority for that proceeding or matter. We agree with those parties who argue that, once the Commission assumes jurisdiction of a proceeding or matter, it retains authority for that proceeding or matter. For example, if the Commission obtains jurisdiction after a state commission fails to respond to a request for arbitration, the Commission maintains jurisdiction over the arbitration proceeding. Therefore, once the proceeding is before the Commission, any and all further action regarding that proceeding or matter will be before the Commission. We note that there is no provision in the Act for returning jurisdiction to the state commission; moreover, the Commission, with significant knowledge of the issues at hand, would be in the best position efficiently to conclude the matter. Thus, as both a legal and policy matter, we believe that the Commission retains jurisdiction over any matter and proceeding for which it assumes responsibility under Section 252(e)(5).

1290. We reject the suggestion by some parties that, once the Commission has mediated or arbitrated an agreement, the agreement must be submitted to the state commission for approval under state law. We note that section 252(e)(5) provides for the Commission to "assume the responsibility of the State commission under this section with respect to the proceeding or matter

[3158] 47 U.S.C. § 252(e)(5).

and act for the State commission."[3159] This includes acting for the state commission under section 252(e)(1), which calls for state commission approval of "any interconnection agreement adopted by negotiation or arbitration."[3160] We, therefore, do not read section 252(e)(1) or any other provision as calling for state commission approval or rejection of agreements mediated or arbitrated by the Commission. In those instances where a state has failed to act, the Commission acts on behalf of the state and no additional state approval is required.

1291. Requirements set forth in section 252(c) for arbitrated agreements would apply to arbitration conducted by the Commission. We see no reason, and no party has suggested a policy or legal basis, for not applying such standards when the Commission conducts arbitration. Thus, arbitrated agreements must: (1) meet the requirements of section 251, including regulations prescribed by the Commission pursuant to section 251; (2) establish any rates for interconnection, services, or network elements according to section 252(d); and (3) provide a schedule for implementation of the terms and conditions by the parties to the agreement.[3161] We reject the suggestion made by some parties that, if the Commission steps into the state commission role, it is bound by state laws and standards that would have applied to the state commission. While states are permitted to establish and enforce other requirements, these are not binding standards for arbitrated agreements under section 252(c). Moreover, the resources and time potentially needed to review adequately and interpret the different laws and standards of each state render this suggestion untenable. Finally, we conclude that it would not make sense to apply to the Commission the timing requirements that section 252(b)(4)(c) imposes on state commissions. The Commission, in some instances, might not even assume jurisdiction until nine months (or more) have lapsed since a section 251 request was initiated.

1292. Based on the comments of the parties, we conclude that a "final offer" method of arbitration, similar to the approach recommended by Vanguard, would best serve the public interest.[3162] Under "final offer" arbitration, each party to the negotiation proposes its best and final offer and the arbitrator determines which of the proposals become binding. The arbitrator would have the option of choosing one of the two proposals in its entirety, or the arbitrator could decide on an issue-by-issue basis. Each final offer must: (1) meet the requirements of section 251, including the Commission's rules thereunder; (2) establish rates for interconnection, services, or network elements according to section 252(d); and (3) provide a schedule for implementation of the terms and conditions by the parties to the agreement.[3163] If a final offer submitted by one

[3159] 47 U.S.C. § 252(e)(5).

[3160] 47 U.S.C. § 252(e)(1).

[3161] 47 U.S.C. § 252(c).

[3162] Vanguard comments at 39-40.

[3163] 47 U.S.C. § 252(c).

or more parties fails to comply with these requirements, the arbitrator would have discretion to take steps designed to result in an arbitrated agreement that satisfies the requirements of section 252(c), including requiring parties to submit new final offers within a time frame specified by the arbitrator, or adopting a result not submitted by any party that is consistent with the requirements in section 252(c).

1293. The parties could continue to negotiate an agreement after they submit their proposals and before the arbitrator makes a decision. Under this approach, the Commission will encourage negotiations, with or without the assistance of the arbitrator, to continue after arbitration offers are exchanged. Parties are not precluded from submitting subsequent final offers following such negotiations. We believe that permitting post-offer negotiations will increase the likelihood that the parties will reach consensus on unresolved issues. In addition, permitting post-offer negotiations will increase flexibility and will allow parties to tailor counter-proposals after arbitration offers are exchanged. To provide an opportunity for final post-offer negotiation, the arbitrator will not issue a decision for at least 15 days after submission of the final offers by the parties. In addition, the offers must be consistent with section 251, including the regulations prescribed by the Commission. We reject SBC's suggestion that an arbitrated agreement is not binding on the parties. Absent mutual agreement to different terms, the decision reached through arbitration is binding. We conclude that it would be inconsistent with the 1996 Act to require incumbent LECs to provide interconnection, services, and unbundled elements, impose a duty to negotiate in good faith and a right to arbitration, and then permit incumbent LECs to not be bound by an arbitrated determination. We also believe that, although competing providers do not have an affirmative duty to enter into agreements under section 252, a requesting carrier might face penalties if, by refusing to enter into an arbitrated agreement, that carrier is deemed to have failed to negotiate in good faith.[3164] Such penalties should serve as a disincentive for requesting carriers to force an incumbent LEC to expand resources in arbitration if the requesting carrier does not intend to abide by the arbitrated decision.

1294. Adopting a "final offer" method of arbitration and encouraging negotiations to continue allows us to maintain the benefits of final offer arbitration, giving parties an incentive to submit realistic "final offers," while providing additional flexibility for the parties to agree to a resolution that best serves their interests. To the extent that these procedures encourage parties to negotiate voluntarily rather than arbitrate, such negotiated agreements will be subject to review pursuant to section 252(e)(2)(A), which would allow the Commission to reject agreements if they are inconsistent with the public interest. This approach also addresses the argument that under "final offer" arbitration neither offer might best serve the public interest, because it allows the parties to obtain feedback from the arbitrator on public interest matters.

1295. We believe that the arbitration proceedings generally should be limited to the requesting carrier and the incumbent local exchange provider. This will allow for a more

[3164] *See* 47 U.S.C. § 252(b)(5) (requiring parties to negotiate in good faith in the course of arbitration).

efficient process and minimize the amount of time needed to resolve disputed issues. We believe that opening the process to all third parties would be unwieldy and would delay the process. We will, however, consider requests by third parties to submit written pleadings. This may, in some instances, allow interested parties to identify important public policy issues not raised by parties to an arbitration.

B. Requirements of Section 252(i)

1. Background

1296. Section 251 requires that interconnection, unbundled element, and collocation rates be "nondiscriminatory" and prohibits the imposition of "discriminatory conditions" on the resale of telecommunications services.[3165] Section 252(i) of the 1996 Act provides that a "local exchange carrier shall make available any interconnection, service, or network element provided under an agreement approved under [section 252] to which it is a party to any other requesting telecommunications carrier upon the same terms and conditions as those provided in the agreement."[3166] In the NPRM, we expressed the view that section 252(i) appears to be a primary tool of the 1996 Act for preventing discrimination under section 251, and we sought comment on whether we should adopt national standards for resolving disputes under section 252(i) in the event that we must assume the state's responsibilities pursuant to section 252(e)(5). In addition, because we may need to interpret section 252(i) if we assume the state commission's responsibilities, we sought comment on the meaning of section 252(i).

1297. We also sought comment in the NPRM on whether section 252(i) requires that only similarly-situated carriers may enforce against incumbent LECs provisions of agreements filed with state commissions, and, if so, how "similarly-situated carrier" should be defined. In particular, we asked whether section 252(i) requires that the same rates for interconnection must be offered to all requesting carriers regardless of the cost of serving that carrier, or whether it would be consistent with the statute to permit different rates if the costs of serving carriers are different. We also asked whether the section can be interpreted to allow incumbent LECs to make available interconnection, services, or network elements only to requesting carriers serving a comparable class of subscribers or providing the same service (*i.e.*, local, access, or interexchange) as the original parties to the agreement. In the NPRM, we tentatively concluded that the language of the statute appears to preclude such differential treatment among carriers.

[3165] 47 U.S.C. §§ 251(c)(2)(D) (interconnection rates, terms, and conditions); 251(c)(3) (unbundled network elements rates, terms, and conditions); 251(c)(6) (collocation rates, terms, and conditions); and 251(c)(4)(B) (resale). Section 252(d)(1) also requires nondiscriminatory interconnection and network element charges. 47 U.S.C. § 252(d)(1).

[3166] 47 U.S.C. § 252(i).

1298. Additionally, we sought comment in the NPRM on whether section 252(i) permits requesting telecommunications carriers to choose among individual provisions of publicly-filed interconnection agreements or whether they must subscribe to an entire agreement. We also sought comment regarding what time period an agreement must remain available for use by other requesting telecommunications carriers.

2. Comments

1299. Two state commissions and SBC believe that implementation of section 252(i) should be left to the states,[3167] while Time Warner favors national standards.[3168] CompTel argues that we should adopt expedited procedures whereby carriers may complain to the Commission when incumbent LECs refuse to make agreements available to them in alleged violation of section 252(i).[3169]

1300. New entrants generally support the view that section 252(i) does not require that requesting carriers seeking to avail themselves of a prior negotiated or arbitrated agreement be "similarly situated" with respect to the original party who negotiated the agreement.[3170] They argue that such a limitation would be contrary to Congress's intent,[3171] or that it could invite perpetual dispute over which carriers are similarly situated and what cost differences are real and material.[3172] Winstar questions whether states could implement a "similarly situated" carrier requirement without unintentionally creating a vehicle for incumbent LECs to discriminate against competitive entrants.[3173] LDDS specifically agrees with the NPRM's tentative conclusion that section 252(i) prohibits incumbent LECs from limiting the availability of agreements to a carrier based on the class of customers the carrier serves or the type of service it provides.[3174] The

[3167] Pennsylvania Commission comments at 43; Louisiana Commission comments at 28-29; SBC Comments at 24.

[3168] Time Warner comments at 112.

[3169] CompTel comments at 107.

[3170] WinStar comments at 18-19; CompTel comments at 106; LDDS comments at 88; Time Warner comments at 113; ACSI reply at 23-24; Telecommunications Resellers Ass'n comments at 50.

[3171] CompTel comments at 106; LDDS comments at 88; Time Warner comments at 113. CompTel also asserts that, subject to cost-based deviations, no carrier should pay more than any other carrier when it purchases the same service or facility from the same incumbent LEC, nor should agreements include language regarding the nature of the carrier who may subsequently emer into the same agreements. CompTel comments at 106.

[3172] Telecommunications Resellers Ass'n comments at 50-51.

[3173] WinStar comments at 18-19.

[3174] LDDS comments at 88.

Telecommunications Resellers Ass'n believes section 252(i) prohibits discrimination on the basis of the cost of serving a carrier, and claims its members have been, and continue to be, denied preferred service offerings and price points in the interexchange market under the guise of a "similarly situated" criterion.[3175]

1301. WinStar suggests we assign to the incumbent LEC a heavy burden of proving that a new carrier is substantially different from the original parties to an agreement, and that we require the incumbent LEC to provide service to the new entrant according to the individual terms of an agreement while the dispute is pending. WinStar asserts that, absent such requirements, the incumbent LEC could use alleged technological differences to create barriers to entry.[3176]

1302. GTE, PacTel, USTA, BellSouth, and the Ohio Consumers' Counsel believe the statute contemplates drawing distinctions between carriers,[3177] such as, for instance, where the incumbent LEC faces different costs in serving different carriers.[3178] According to GTE and PacTel, carriers must be "similarly situated" because the subsequent carrier's technical requirements may be incompatible with the incumbent LEC's network.[3179] GTE asserts that providing service under an agreement to carriers that are not similarly situated with respect to the technical feasibility and costs of interconnection and transport and termination would be inconsistent with the 1996 Act's requirements that interconnection be technically feasible and offered at cost-based rates.[3180]

1303. Incumbent LECs also generally oppose the view that section 252(i) permits competitive carriers to choose among provisions in a publicly-filed interconnection agreement.[3181] For instance, BellSouth contends that the text of section 252(i) supports its view, and that the legislative history reference cited in the NPRM casts no light on Congress' intent because the

[3175] Telecommunications Resellers Ass'n comments at 50-51.

[3176] WinStar comments at 19 n.14. WinStar further suggests that the LEC should be required to adjust the arrangement to account for differences in technology employed by the new entrant, without revising material terms of the arrangement. *Id.*

[3177] GTE comments at 82-83; PacTel comments at 101; USTA comments at 95-96; BellSouth comments at 80-81; Ohio Consumers' Counsel comments at 51.

[3178] GTE comments at 82-83; Municipal Utilities comments at 14; USTA comments at 96.

[3179] GTE comments at 82-83; PacTel comments at 101.

[3180] GTE comments at 83.

[3181] *See, e.g.*, Ameritech comments at 98-99; BellSouth comments at 81; Bay Springs *et al* comments at 19; GTE comments at 83; SBC comments at 24; USTA comments at 96-97.

House did not recede to the Senate's language.[3182] GTE urges the Commission to treat the availability of agreements under section 252(i) the same way it treats AT&T Tariff 12 and Contract Tariff offerings.[3183] Ameritech, GTE and SBC also contend that section 252(i)'s requirement that a requesting carrier take service upon the same terms and conditions as the original carrier precludes unbundled availability.[3184] USTA argues unbundled availability of agreement provisions will skew the individualized nature of negotiations, magnify the importance of each individual term of an agreement, and encourage incumbent LECs to offer only standardized, relatively high-cost packages.[3185]

1304. New entrants, joined by the Ohio Commission, support the view that the statute makes individual provisions of agreements available to carriers.[3186] They argue that this comports with the statutory language and legislative history,[3187] and that requiring requesting carriers to take an entire agreement will cause delay[3188] and foster discrimination by enabling incumbent LECs to fashion agreements so that no subsequent carrier may benefit from them.[3189] MCI argues that, although this approach may make incumbents less likely to compromise, the effect on negotiations will be small.[3190] The SBA asserts allowing entrants to utilize individual provisions of agreements will lead to increased competition, which, in turn, will drive prices towards the most economically efficient levels, and that these benefits outweigh any additional burden that

[3182] BellSouth comments at 81.

[3183] GTE comments at 83; *see also* BellSouth comments at 81; USTA comments at 97.

[3184] Ameritech comments at 99; GTE comments at 83; SBC comments at 24.

[3185] USTA comments at 96.

[3186] *See, e.g.*, ALTS comments at 54-55; LDDS comments at 89; Jones Intercable comments at 36; Sprint reply at 48; CompTel reply at 45; AT&T comments at 89-90; NEXTLINK comments at 36-37; MFS comments at 90-91; Time Warner reply at 45-46; Telecommunications Resellers Ass'n comments at 51; Ohio Commission comments at 84. Teleport argues that, if the FCC does not adopt its "preferred outcomes" paradigm for negotiations, it should allow carriers to pick and choose among provisions, asserting that without the ability to pick and choose among provisions, unequal bargaining conditions between LECs and competitive LECs will make meaningful negotiations impossible. Teleport comments at 54-55.

[3187] WinStar comments at 17-18; MCI comments at 96; Jones Intercable comments at 36; SBA comments at 17; Time Warner reply at 46.

[3188] WinStar comments at 18.

[3189] *See, e.g.*, Telecommunications Resellers Ass'n comments at 51; Sprint reply at 48; AT&T comments at 90 n.139; MFS comments at 90-91.

[3190] MCI comments at 96.

such unbundling may place upon incumbents in negotiating agreements.[3191] SBA further argues that failure to permit unbundling of agreements would deter entry by smaller competitors that are unable or unwilling to pay for all of the elements contained in a an agreement negotiated by a larger competitor.[3192] CompTel asks that we rule that an incumbent LEC may not insist upon the observance of any term or condition that is not reasonable in the context of the requesting carrier.[3193]

1305. ALTS suggests that we permit unbundled availability to the level of the individual paragraphs and sections of section 251, with the exception of network elements provided pursuant to section 251(c)(3), which ALTS believes should be provided individually to non-parties on a disaggregated basis.[3194] ALTS argues such a rule would reduce concern that unbundled availability would slow the negotiation process by magnifying the importance of individual terms.[3195] Jones Intercable requests that we clarify that the statute permits so-called "most favored nation" provisions, which allow a new entrant with an interconnection agreement in place with an incumbent LEC to modify such an agreement to substitute the preferable terms included in a later agreement that the incumbent LEC enters with a subsequent new entrant.[3196]

1306. Parties' suggestions for the length of time agreements should remain on file pursuant to section 252(i) range from a reasonable period,[3197] until changes in the network adopted for independent reasons make it no longer feasible to provide interconnection under an agreement,[3198] to as long as the agreement remains in operation.[3199] Out of concern that incumbent LECs might force competitors to renegotiate agreements at unreasonably short

[3191] SBA comments at 18.

[3192] SBA comments at 16-17; *see also* R. Koch comments at 3.

[3193] CompTel comments at 107.

[3194] ALTS comments at 54-55.

[3195] *Id.*

[3196] Jones Intercable comments at 36.

[3197] BellSouth comments at 81-82. GTE suggested agreements remain publicly available for a reasonable period, as Commission requires for AT&T's Tariff 12. GTE comments at 83.

[3198] MCI comments at 97.

[3199] Telecommunications Resellers Ass'n comments at 51-52; Time Warner comments at 114; Lincoln Tel. comments at 25-26.

intervals, the SBA argues that there should be no arbitrary limit on the duration of agreements.[3200]

1307. Several new entrants also raise issues concerning the filing of agreements pursuant to section 252(i). Jones Intercable urges us to require that incumbent LECs file copies of all negotiated agreements at the FCC, as well as at state commissions.[3201]

1308. AT&T and the Telecommunications Resellers Ass'n believe section 252(i) requires that interconnection agreements negotiated prior to enactment of the 1996 Act be available for use by requesting telecommunications carriers,[3202] while F. Williamson opposes this view.[3203] MFS, NCTA and WinStar urge us to find that section 252(i) applies to interconnection agreements between adjacent, non-competing LECs.[3204] BellSouth is opposed.[3205]

3. Discussion

1309. We conclude that it will assist the carriers in determining their respective obligations, facilitate the development of a single, uniform legal interpretation of the Act's requirements and promote a procompetitive, national policy framework to adopt national standards to implement section 252(i). Issues such as whether section 252(i) allows requesting telecommunications carriers to choose among provisions of prior interconnection agreements or requires them to accept an entire agreement are issues of law that should not vary from state to state and are also central to the statutory scheme and to the emergence of competition. National standards will help state commissions and parties to expedite the resolution of disputes under section 252(i).

1310. We conclude that the text of section 252(i) supports requesting carriers' ability to choose among individual provisions contained in publicly filed interconnection agreements. As we note above, section 252(i) provides that a "local exchange carrier shall make available any

[3200] SBA comments at 18.

[3201] Jones Intercable comments at 20.

[3202] AT&T comments at 89; Telecommunications Resellers Ass'n comments at 52.

[3203] F. Williamson comments at 5 (arguing that nothing in the 1996 Act requires that existing agreements be submitted or resubmitted to a state commission for approval). F. Williamson further comments that the statute does not permit one party to an existing agreement compel renegotiation (and/or arbitration) under the procedures in section 252. *Id.*

[3204] MFS comments at 86; NCTA reply at 13; WinStar reply at 19.

[3205] BellSouth comments at 64; *see also* Rural Tel. Coalition comments at 15-16 (asserting sections 251-252 do not apply to agreements between adjacent, non-competing carriers).

interconnection, service, or network element provided under an agreement . . . to which it is a party to any other requesting telecommunications carrier upon the same terms and conditions as those provided in the agreement."[3206] Thus, Congress drew a distinction between "any interconnection, service, or network element[s] provided under an agreement," which the statute lists individually, and agreements in their totality. Requiring requesting carriers to elect entire agreements, instead of the provisions relating to specific elements, would render as mere surplusage the words "any interconnection, service, or network element."

1311. We disagree with BellSouth regarding the significance of the legislative history quoted in the NPRM. The Conference Committee amended section 251(g), S. 652's predecessor to section 252(i), and changed "service, facility, or function" to "interconnection, service, or element." The House of Representatives' bill did not contain a version of section 252(i).[3207] We find that section 252(i)'s language does not differ substantively from the text of the Senate bill's section 251(g). The Senate Commerce Committee stated its provision, section 251(g), was intended to "make interconnection more efficient by making available to other carriers the individual elements of agreements that have been previously negotiated."[3208]

1312. We also find that practical concerns support our interpretation. As observed by AT&T and others, failure to make provisions available on an unbundled basis could encourage an incumbent LEC to insert into its agreement onerous terms for a service or element that the original carrier does not need, in order to discourage subsequent carriers from making a request under that agreement. In addition, we observe that different new entrants face differing technical constraints and costs. Since few new entrants would be willing to elect an entire agreement that would not reflect their costs and the specific technical characteristics of their networks or would not be consistent with their business plans, requiring requesting carriers to elect an entire agreement would appear to eviscerate the obligation Congress imposed in section 252(i).

1313. We also choose this interpretation despite concerns voiced by some incumbent LECs that allowing carriers to choose among provisions will harm the public interest by slowing down the process of reaching interconnection agreements by making incumbent LECs less likely to compromise. In reaching this conclusion, we observe that new entrants, who stand to lose the most if negotiations are delayed, generally do not argue that concern over slow negotiations would outweigh the benefits they would derive from being able to choose among terms of publicly filed agreements. Unbundled access to agreement provisions will enable smaller carriers

[3206] 47 U.S.C. § 252(i).

[3207] Although H.R. 1555's section 244(d) contained similar ideas, its language and structure are sufficiently different from that of section 252(i) that we do not consider section 244(d) to be a prior version of section 252(i).

[3208] *Report of the Committee on Commerce, Science, and Transportation on S. 652*, S. Rpt. 104-23, 104th Cong., 1st Sess. (1995) at 21-22.

who lack bargaining power to obtain favorable terms and conditions -- including rates -- negotiated by large IXCs, and speed the emergence of robust competition.[3209]

1314. We conclude that incumbent LECs must permit third parties to obtain access under section 252(i) to any individual interconnection, service, or network element arrangement on the same terms and conditions as those contained in any agreement approved under section 252. We find that this level of disaggregation is mandated by section 252(a)(1), which requires that agreements shall include "charges for interconnection and each service or network element included in the agreement," and section 251(c)(3), which requires incumbent LECs to provide "non-discriminatory access to network elements on an unbundled basis." In practical terms, this means that a carrier may obtain access to individual elements such as unbundled loops at the same rates, terms, and conditions as contained in any approved agreement. We agree with ALTS that such a view comports with the statute, and lessens the concerns of carriers that argue that unbundled availability will delay negotiations.

1315. We reject GTE's argument that section 252(i)'s statement, that requesting carriers must receive individual elements "upon the same terms and conditions" as those contained in the agreement, precludes unbundled availability of individual elements. GTE's argument fails to give meaning to Congress's distinction between agreements and elements, and ignores the 1996 Act's prime goals of nondiscriminatory treatment of carriers and promotion of competition. Instead, we conclude that the "same terms and conditions" that an incumbent LEC may insist upon shall relate solely to the individual interconnection, service, or element being requested under section 252(i). For instance, where an incumbent LEC and a new entrant have agreed upon a rate contained in a five-year agreement, section 252(i) does not necessarily entitle a third party to receive the same rate for a three-year commitment. Similarly, that one carrier has negotiated a volume discount on loops does not automatically entitle a third party to obtain the same rate for a smaller amount of loops. Given the primary purpose of section 252(i) of preventing discrimination, we require incumbent LECs seeking to require a third party agree to certain terms and conditions to exercise its rights under section 252(i) to prove to the state commission that the terms and conditions were legitimately related to the purchase of the individual element being sought. By contrast, incumbent LECs may not require as a "same" term or condition the new entrant's agreement to terms and conditions relating to other interconnection, services, or elements in the approved agreement. Moreover, incumbent LEC efforts to restrict availability of interconnection, services, or elements under section 252(i) also must comply with the 1996 Act's general nondiscrimination provisions. *See* Section VII.d.3.

1316. We further conclude that section 252(i) entitles all parties with interconnection agreements to "most favored nation" status regardless of whether they include "most favored nation" clauses in their agreements. Congress's command under section 252(i) was that parties may utilize any individual interconnection, service, or element in publicly filed interconnection

[3209] *See* Regulatory Flexibility Act, 5 U.S.C. §§ 601 et seq.

agreements and incorporate it into the terms of their interconnection agreement. This means that any requesting carrier may avail itself of more advantageous terms and conditions subsequently negotiated by any other carrier for the same individual interconnection, service, or element once the subsequent agreement is filed with, and approved by, the state commission. We believe the approach we adopt will maximize competition by ensuring that carriers' obtain access to terms and elements on a nondiscriminatory basis.

1317. We find that section 252(i) permits differential treatment based on the LEC's cost of serving a carrier. We further observe that section 252(d)(1) requires that unbundled element rates be cost-based, and sections 251(c)(2) and (c)(3) require incumbent LECs to provide only technically-feasible forms of interconnection and access to unbundled elements, while section 252(i) mandates that the availability of publicly-filed agreements be limited to carriers willing to accept the same terms and conditions as the carrier who negotiated the original agreement with the incumbent LEC. We conclude that these provisions, read together, require that publicly-filed agreements be made available only to carriers who cause the incumbent LEC to incur no greater costs than the carrier who originally negotiated the agreement, so as to result in an interconnection arrangement that is both cost-based and technically feasible. However, as discussed in Section VII regarding discrimination, where an incumbent LEC proposes to treat one carrier differently than another, the incumbent LEC must prove to the state commission that that differential treatment is justified based on the cost to the LEC of providing that element to the carrier.

1318. We conclude, however, that section 252(i) does not permit LECs to limit the availability of any individual interconnection, service, or network element only to those requesting carriers serving a comparable class of subscribers or providing the same service (*i.e.*, local, access, or interexchange) as the original party to the agreement. In our view, the class of customers, or the type of service provided by a carrier, does not necessarily bear a direct relationship with the costs incurred by the LEC to interconnect with that carrier or on whether interconnection is technically feasible. Accordingly, we conclude that an interpretation of section 252(i) that attempts to limit availability by class of customer served or type of service provided would be at odds with the language and structure of the statute, which contains no such limitation.

1319. We agree with those commenters who suggest that agreements remain available for use by requesting carriers for a reasonable amount of time. Such a rule addresses incumbent LEC concerns over technical incompatibility, while at the same time providing requesting carriers with a reasonable time during which they may benefit from previously negotiated agreements. In addition, this approach makes economic sense, since the pricing and network configuration choices are likely to change over time, as several commenters have observed. Given this reality, it would not make sense to permit a subsequent carrier to impose an agreement or term upon an incumbent LEC if the technical requirements of implementing that agreement or term have changed.

1320. We observe that section 252(h) expressly provides that state commissions maintain for public inspection copies of interconnection agreements approved under section 252(e). We therefore decline Jones Intercable's suggestion that we require carriers to file agreements at the FCC, in addition to section 252(h)'s filing requirement. However, when the Commission performs the state's responsibilities under section 252(e)(5), parties must file their agreements with the Commission, as well as with the state commission.[3210]

1321. We further conclude that a carrier seeking interconnection, network elements, or services pursuant to section 252(i) need not make such requests pursuant to the procedures for initial section 251 requests, but shall be permitted to obtain its statutory rights on an expedited basis. We find that this interpretation furthers Congress's stated goals of opening up local markets to competition and permitting interconnection on just, reasonable, and nondiscriminatory terms, and that we should adopt measures that ensure competition occurs as quickly and efficiently as possible. We conclude that the nondiscriminatory, pro-competition purpose of section 252(i) would be defeated were requesting carriers required to undergo a lengthy negotiation and approval process pursuant to section 251 before being able to utilize the terms of a previously approved agreement. Since agreements shall necessarily be filed with the states pursuant to section 252(h), we leave to state commissions in the first instance the details of the procedures for making agreements available to requesting carriers on an expedited basis. Because of the importance of section 252(i) in preventing discrimination, however, we conclude that carriers seeking remedies for alleged violations of section 252(i) shall be permitted to obtain expedited relief at the Commission, including the resolution of complaints under section 208 of the Communications Act, in addition to their state remedies.

1322. We conclude as well that agreements negotiated prior to enactment of the 1996 Act must be available for use by subsequent, requesting carriers. Section 252(i) must be read in conjunction with section 252(a)(1), which clearly states that "agreement" for purposes of section 252, "includ[es] any interconnection agreement negotiated before the date of enactment . . . ."[3211] We conclude that this language demonstrates that Congress intended 252(i) to apply to agreements negotiated prior to enactment of the 1996 Act and approved by the state commission pursuant to section 252(e), as well as those approved under the section 251/252 negotiation process. Accordingly, we find that agreements negotiated prior to enactment of the 1996 Act must be disclosed publicly, and be made available to requesting telecommunications carriers pursuant to section 252(i).

1323. We also find that section 252(i) applies to interconnection agreements between adjacent, incumbent LECs. We note that section 252(i) requires a local exchange carrier to make

[3210] We note section 22.903(d) of our rules, which remains in effect, requires the BOCs to file with us their interconnection agreements with their affiliated cellular providers. 47 C.F.R. § 22.903(d).

[3211] 47 U.S.C. § 252(a)(1).

available to requesting telecommunications carriers "any interconnection service, or network element *provided under an agreement approved under this section* . . . ."[3212] The plain meaning of this section is that any interconnection agreement approved by a state commission, including one between adjacent LECs, must be made available to requesting carriers pursuant to section 252(i). Requiring availability of such agreements will provide new entrants with a realistic benchmark upon which to base negotiations, and this will further the Congressional purpose of increasing competition. As stated in Section III of this Order, adjacent, incumbent LECs will be given an opportunity to renegotiate such agreements before they become subject to section 252(i)'s requirements. In Section III, we also consider, and reject, the Rural Tel. Coalition's argument that making agreements between adjacent, non-competing LECs available under section 252 will have a detrimental effect on small, rural carriers. *See* Section III, *supra*.

[3212] 47 U.S.C. § 252(i) (emphasis supplied).

XV. FINAL REGULATORY FLEXIBILITY ANALYSIS

1324. As required by Section 603 of the Regulatory Flexibility Act (RFA), 5 U.S.C. § 603, an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the NPRM. The Commission sought written public comment on the proposals in the NPRM. The Commission's Final Regulatory Flexibility Analysis (FRFA) in this Order conforms to the RFA, as amended by the Contract With America Advancement Act of 1996 (CWAAA), Pub. L. No. 104-121, 110 Stat. 847 (1996).[3213]

A. Need for and Objectives of this Report and Order and the Rules Adopted Herein

1325. The Commission, in compliance with section 251(d)(1) of the Communications Act of 1934, as amended by the Telecommunications Act of 1996 (the 1996 Act), promulgates the rules in this Order to ensure the prompt implementation of sections 251 and 252 of the 1996 Act, which are the local competition provisions. Congress sought to establish through the 1996 Act "a pro-competitive, de-regulatory national policy framework" for the United States telecommunications industry.[3214] Three principal goals of the telephony provisions of the 1996 Act are: (1) opening local exchange and exchange access markets to competition; (2) promoting increased competition in telecommunications markets that are already open to competition, particularly long distance services markets; and, (3) reforming our system of universal service so that universal service is preserved and advanced as local exchange and exchange access markets move from monopoly to competition.

1326. The rules adopted in this Order implement the first of these goals -- opening local exchange and exchange access markets to competition. The objective of the rules adopted in this Order is to implement as quickly and effectively as possible the national telecommunications policies embodied in the 1996 Act and to promote the development of competitive, deregulated markets envisioned by Congress.[3215] In doing so, we are mindful of the balance that Congress struck between this goal of bringing the benefits of competition to all consumers and its concern for the impact of the 1996 Act on small incumbent local exchange carriers, particularly rural carriers, as evidenced in section 251(f) of the 1996 Act.

[3213] Subtitle II of the CWAAA is "The Small Business Regulatory Enforcement Fairness Act of 1996" (SBREFA), codified at 5 U.S.C. § 601 *et seq.*

[3214] S. Conf. Rep. No. 230, 104th Cong., 2d Sess. 1 (1996).

[3215] *Id.*

B. Analysis of Significant Issues Raised in Response to the IRFA

1327. *Summary of the Initial Regulatory Flexibility Analysis (IRFA).* In the NPRM, the Commission performed an IRFA.[3216] In the IRFA, the Commission found that the rules it proposed to adopt in this proceeding may have a significant impact on a substantial number of small business as defined by section 601(3) of the RFA. The Commission stated that its regulatory flexibility analysis was inapplicable to incumbent LECs because such entities are dominant in their field of operation. The Commission noted, however, that it would take appropriate steps to ensure that the special circumstances of smaller incumbent LECs are carefully considered in our rulemaking. The Commission also found that the proposed rules may overlap or conflict with the Commission's Part 69 access charge and *Expanded Interconnection* rules. Finally, the IRFA solicited comment on alternatives to our proposed rules that would minimize the impact on small entities consistent with the objectives of this proceeding.

1. Treatment of Small LECs

1328. *Comments.* The Small Business Administration (SBA), the Rural Telephone Coalition (Rural Tel. Coalition), and CompTel maintain that the Commission violated the RFA when it failed to include small incumbent LECs in its IRFA without first consulting SBA to establish a definition of "small business."[3217] Rural Tel. Coalition and CompTel also argue that the Commission failed to explain its statement that "incumbent LECs are dominant in their field of operation" or how that finding was reached.[3218] Rural Tel. Coalition states that such an analysis of the market power of incumbent LECs is necessary because incumbent LECs are now facing competition from a variety of sources, including wireline and wireless carriers. Rural Tel. Coalition recommends that the Commission abandon its determination that all incumbent LECs are dominant, and perform regulatory flexibility analysis for incumbent LECs having fewer than 1500 employees.[3219]

1329. *Discussion.* In essence, SBA and Rural Tel. Coalition argue that we exceeded our authority under the RFA by certifying all incumbent LECs as dominant in their field of operation, and concluding on that basis that they are not small businesses under the RFA. SBA and Rural Tel. Coalition contend that the authority to make a size determination rests solely with SBA and that, by excluding a group (small incumbent LECs) from coverage under the RFA, the

[3216] NPRM at paras. 274-287.

[3217] SBA RFA comments at 3-5; Rural Tel. Coalition reply at 38-39; CompTel reply at 46.

[3218] Rural Tel. Coalition reply at 39; CompTel reply at 46.

[3219] Rural Tel. Coalition reply at 40.

Commission made an unauthorized size determination.[3220] Neither SBA nor Rural Tel. Coalition cites any specific authority for this latter proposition.

1330. We have found incumbent LECs to be "dominant in their field of operation" since the early 1980's, and we consistently have certified under the RFA[3221] that incumbent LECs are not subject to regulatory flexibility analyses because they are not small businesses.[3222] We have made similar determinations in other areas.[3223] We recognize SBA's special role and expertise with regard to the RFA, and intend to continue to consult with SBA outside the context of this proceeding to ensure that the Commission is fully implementing the RFA. Although we are not fully persuaded on the basis of this record that our prior practice has been incorrect, in light of the special concerns raised by SBA and Rural Tel. Coalition in this proceeding, we will, nevertheless, include small incumbent LECs in this FRFA to remove any possible issue of RFA compliance. We, therefore, need not address Rural Tel. Coalition's arguments that incumbent LECs are not dominant.[3224]

2. Other Issues

1331. *Comments.* Parties raised several other issues in response to the Commission's IRFA in the NPRM. SBA and CompTel contend that commenters should not be required to separate their comments on the IRFA from their comments on the other issues raised in the NPRM.[3225] SBA maintains that separating RFA comments and discussion from the rest of the comments "isolates" the regulatory flexibility analysis from the remainder of the discussion, thereby handicapping the Commission's analysis of the impact of the proposed rules on small businesses.[3226] SBA further suggests that our IRFA failed to: (1) give an adequate description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rules,

[3220] SBA RFA comments at 4-5 (citing 15 U.S.C. §632(a)(2)); Rural Tel. Coalition reply at 38.

[3221] *See* 5 U.S.C. § 605(b).

[3222] *See, e.g., Expanded Interconnection with Local Telephone Company Facilities*, Supplemental Notice of Proposed Rulemaking, 6 FCC Rcd 5809 (1991); *MTS and WATS Market Structure*, Report and Order, 2 FCC Rcd 2953, 2959 (1987) (citing *MTS and WATS Market Structure*, Third Report and Order, 93 F.C.C.2d 241, 338-39 (1983)).

[3223] *See, e.g., In the Matter of Implementation of Sections of the Cable Television Consumer Protection Act of 1992: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7418 (1995).

[3224] Rural Tel. Coalition reply at 39-40.

[3225] SBA RFA comments at 2-3, CompTel reply at 46.

[3226] *Id.*

including an estimate of the classes of small entities that will be subject to the requirement and the professional skills necessary to prepare such reports or records;[3227] and (2) describe significant alternatives that minimize the significant economic impact of the proposal on small entities, including exemption from coverage of the rule.[3228] SBA also asserts that none of the alternatives in the NPRM is designed to minimize the impact of the proposed rules on small businesses.

1332. The Idaho Commission argues that the Commission's rules will be devised for large carriers and therefore will be "de facto burdensome" to Idaho's incumbent LECs and probably to potential new entrants, which may be small companies.[3229] Therefore, Idaho requests that state commissions be permitted flexibility to address the impacts of our rules on smaller incumbent LECs.

1333. The Small Cable Business Association (SCBA) contends that the Commission's IRFA is inadequate because it does not state that small cable companies are among the small entities affected by the proposed rules.[3230] In its comments on the IRFA, SCBA refers to its proposal that the Commission establish the following national standards for small cable companies: (1) the definition of "good faith" negotiation; (2) the development of less burdensome arbitration procedures for interconnection and resale; (3) the designation of a small company contact person at incumbent LECs and state commissions; and (4) the application of section 251(f) of the 1996 Act.[3231]

1334. *Discussion.* We disagree with SBA's assessment of our IRFA. Although the IRFA referred only generally to the reporting and recordkeeping requirements imposed on incumbent LECs, our Federal Register notice set forth in detail the general reporting and recordkeeping requirements as part of our Paperwork Reduction Act statement.[3232] The IRFA also sought comment on the many alternatives discussed in the body of the NPRM, including the statutory exemption for certain rural telephone companies.[3233] The numerous general public comments concerning the impact of our proposal on small entities in response to the NPRM, including

[3227] SBA RFA comments at 5-6, *citing* 5 U.S.C. § 603(b)(4).

[3228] SBA RFA comments at 7-8, *citing* 5 U.S.C. § 603(c).

[3229] Idaho Commission comments at 15.

[3230] SCBA RFA comments at 1.

[3231] *Id.* at 1-2.

[3232] NPRM, at para. 283 (rel. Apr. 19, 1996), *summarized at* 61 Fed. Reg. 18311, 18312 (Apr. 25, 1996).

[3233] 47 U.S.C. § 251(f).

comments filed directly in response to the IRFA,[3234] enabled us to prepare this FRFA. Thus, we conclude that the IRFA was sufficiently detailed to enable parties to comment meaningfully on the proposed rules and, thus, for us to prepare this FRFA. We have been working with, and will continue to work with SBA, to ensure that both our IRFAs and FRFAs fully meet the requirements of the RFA.

1335. SBA also objects to the NPRM's requirement that responses to the IRFA be filed under a separate and distinct heading, and proposes that we integrate RFA comments into the body of general comments on a rule.[3235] Almost since the adoption of the RFA, we have requested that IRFA comments be submitted under a separate and distinct heading.[3236] Neither the RFA nor SBA's rules prescribe the manner in which comments may be submitted in response to an IRFA[3237] and, in such circumstances, it is well established that an administrative agency can structure its proceedings in any manner that it concludes will enable it to fulfill its statutory duties.[3238] Based on our past practice, we find that separation of comments responsive to the IRFA facilitates our preparation of a compulsory summary of such comments and our responses to them, as required by the RFA. Comments on the impact of our proposed rules on small entities have been integrated into our analysis and consideration of the final rules. We, therefore, reject SBA's argument that we improperly required commenters to include their comments on the IRFA in a separate section.

1336. We also reject SBA's assertion that none of the alternatives in the NPRM is designed to minimize the impact of the proposed rules on small businesses. For example, we proposed that incumbent LECs be required to offer competitors access to unbundled local loop, switching, and transport facilities.[3239] These proposals permit potential competitors to enter the market by relying, in part or entirely, on the incumbent LEC's facilities. Reduced economic entry barriers are designed to provide reasonable opportunities for new entrants, particularly small entities, to enter the market by minimizing the initial investment needed to begin providing service. In addition, we believe section 251(f) and our rules provide states with significant

[3234] SBA RFA comments; Rural Tel. Coalition reply at 38-41; Idaho Commission comments at 15; SCBA RFA comments; CompTel reply at 45-46.

[3235] SBA RFA comments at 2.

[3236] *See, e.g., Inquiry into the Development of Regulatory Policy in Regard to Direct Broadcast Satellites*, Notice of Proposed Policy Statement and Rulemaking, 86 F.C.C.2d 719, 755 (1981).

[3237] *See* 5 U.S.C. § 603 (IRFA requirements).

[3238] *See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 524-25 (1978), *citing FCC v. Schreiber*, 381 U.S. 279, 290 (1965) and *FCC v. Pottsville Broadcasting Co.*, 309 U.S. 134, 138 (1940).

[3239] NPRM paras. 94-97.

flexibility to "deal with the needs of individual companies in light of public interest concerns," as requested by the Idaho Commission. With regard to the potential burdens on small entities other than incumbent LECs, we believe our rules permit states to structure arbitration procedures, for example, in ways that minimize filing or other burdens on new entrants that are small entities.

1337. We also disagree with SCBA's assertion that the IRFA was deficient because it did not identify small cable operators as entities that would be affected by the proposed rules. The IRFA in the NPRM states: "Insofar as the proposals in this Notice apply to telecommunications carriers other than incumbent LECs (generally interexchange carriers and new LEC entrants), they may have a significant impact on a substantial number of small entities."[3240] The phrase "new LEC entrants" clearly encompasses small cable operators that become providers of local exchange service. The NPRM even identifies cable operators as potential new entrants.[3241]

1338. We agree with SCBA's argument that the Commission should identify certain minimum standards to provide guidance on the requirement that parties negotiate in good faith.[3242] As discussed in Section III.B, we conclude that we should establish minimum standards that will offer parties guidance in determining whether they are acting in good faith. We believe that these minimum standards address SCBA's assertion that federal guidelines for good faith negotiations may be particularly important for small entities because unreasonable delays in negotiations could represent an entry barrier for small entities.

1339. We also agree with SCBA's recommendation that we should establish guidelines for the application of section 251(f) regarding exemptions, suspensions, and modifications of our rules governing interconnection with rural carriers. As discussed in section XII.B, we find that a rural incumbent LEC should not be able to obtain an exemption, suspension, or modification of its obligations under section 251 unless it offers evidence that the application of those requirements would be likely to cause injury beyond the financial harm typically associated with efficient competitive entry. We are also persuaded by the suggestion of SCBA and others that incumbent LECs should bear the burden of showing that they should be exempt pursuant to section 251(f)(1) from national interconnection requirements. We believe that this finding is consistent with the pro-competitive goals of the 1996 Act and our determination in Section XII that Congress did not intend to withhold from consumers the benefits of local telephone competition that could be provided by small entities, such as small cable operators.

[3240] NPRM para. 277.

[3241] NPRM para. 7.

[3242] This good faith requirement is found in 47 U.S.C. § 251(c)(1).

1340. We do not adopt SCBA's proposal to establish abbreviated arbitration procedures.[3243] Most commenters oppose adoption of federal rules to govern state mediation and arbitration proceedings. As set out in Section XIV.A, we conclude that state commissions are better positioned to develop rules for mediation and arbitration that support the objectives of the 1996 Act. The rules we adopt in Section XIV.A apply only where the Commission assumes a state commission's responsibilities pursuant to section 252(e)(5). States may develop specific measures that address the concerns of small entities participating in mediation or arbitration, as suggested by SCBA. In addition, although we do not specifically incorporate SCBA's request that the Commission designate a "small company contact person at incumbent LECs and state commissions,"[3244] we find that a refusal throughout the negotiation process to designate a representative with authority to make binding representations on behalf of the party, and thereby significantly delay resolution of issues, would constitute failure to negotiate in good faith. Therefore, we conclude that the potential benefits of SCBA's proposal are achieved by our determination that the failure of an incumbent LEC to designate a person authorized to bind his or her company in negotiations is a violation of the good faith obligation of section 251.

C. Description and Estimates of the Number of Small Entities Affected by this Report and Order

1341. For the purposes of this Order, the RFA defines a "small business" to be the same as a "small business concern" under the Small Business Act, 15 U.S.C. § 632, unless the Commission has developed one or more definitions that are appropriate to its activities.[3245] Under the Small Business Act, a "small business concern" is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) meets any additional criteria established by the Small Business Administration (SBA).[3246] SBA has defined businesses in Standard Industrial Classification (SIC) categories 4812 (Radiotelephone Communications) and 4813 (Telephone Communications, Except Radiotelephone) to be small entities when they have fewer than 1,500 employees.[3247] We first discuss generally the total number of small telephone companies falling within both of those SIC categories. Then, we discuss the number of small businesses within the two subcategories, and attempt to refine further those estimates to correspond with the categories of telephone companies that are commonly used under our rules.

[3243] SCBA RFA comments at 1-2.

[3244] SCBA RFA comments at 2.

[3245] *See* 15 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 5 U.S.C. § 632).

[3246] 15 U.S.C. § 632. *See, e.g., Brown Transport Truckload, Inc. v. Southern Wipers, Inc.*, 176 B.R. 82 (N.D. Ga. 1994).

[3247] 13 C.F.R. § 121.201.

1342. Consistent with our prior practice, we shall continue to exclude small incumbent LECs from the definition of a small entity for the purpose of this FRFA. Nevertheless, as mentioned above, we include small incumbent LECs in our FRFA. Accordingly, our use of the terms "small entities" and "small businesses" does not encompass "small incumbent LECs." We use the term "small incumbent LECs" to refer to any incumbent LECs that arguably might be defined by SBA as "small business concerns."[3248]

1. Telephone Companies (SIC 481)

1343. *Total Number of Telephone Companies Affected.* Many of the decisions and rules adopted herein may have a significant effect on a substantial number of the small telephone companies identified by SBA. The United States Bureau of the Census ("the Census Bureau") reports that, at the end of 1992, there were 3,497 firms engaged in providing telephone services, as defined therein, for at least one year.[3249] This number contains a variety of different categories of carriers, including local exchange carriers, interexchange carriers, competitive access providers, cellular carriers, mobile service carriers, operator service providers, pay telephone operators, PCS providers, covered SMR providers, and resellers. It seems certain that some of those 3,497 telephone service firms may not qualify as small entities or small incumbent LECs because they are not "independently owned and operated."[3250] For example, a PCS provider that is affiliated with an interexchange carrier having more than 1,500 employees would not meet the definition of a small business. It seems reasonable to conclude, therefore, that fewer than 3,497 telephone service firms are small entity telephone service firms or small incumbent LECs that may be affected by this Order.

1344. *Wireline Carriers and Service Providers.* SBA has developed a definition of small entities for telephone communications companies other than radiotelephone (wireless) companies. The Census Bureau reports that, there were 2,321 such telephone companies in operation for at least one year at the end of 1992.[3251] According to SBA's definition, a small business telephone company other than a radiotelephone company is one employing fewer than 1,500 persons.[3252] All but 26 of the 2,321 non-radiotelephone companies listed by the Census Bureau were reported to have fewer than 1,000 employees. Thus, even if all 26 of those companies had more than 1,500 employees, there would still be 2,295 non-radiotelephone companies that might qualify as

[3248] *Id.*

[3249] United States Department of Commerce, Bureau of the Census, *1992 Census of Transportation, Communications, and Utilities: Establishment and Firm Size*, at Firm Size 1-123 (1995) (*1992 Census*).

[3250] 15 U.S.C. § 632(a)(1).

[3251] *1992 Census, supra*, at Firm Size 1-123.

[3252] 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

small entities or small incumbent LECs. Although it seems certain that some of these carriers are not independently owned and operated, we are unable at this time to estimate with greater precision the number of wireline carriers and service providers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 2,295 small entity telephone communications companies other than radiotelephone companies that may be affected by the decisions and rules adopted in this Order.

1345. *Local Exchange Carriers.* Neither the Commission nor SBA has developed a definition of small providers of local exchange services (LECs). The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of LECs nationwide of which we are aware appears to be the data that we collect annually in connection with the Telecommunications Relay Service (TRS). According to our most recent data, 1,347 companies reported that they were engaged in the provision of local exchange services.[3253] Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of LECs that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 1,347 small incumbent LECs that may be affected by the decisions and rules adopted in this Order.

1346. *Interexchange Carriers.* Neither the Commission nor SBA has developed a definition of small entities specifically applicable to providers of interexchange services (IXCs). The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of IXCs nationwide of which we are aware appears to be the data that we collect annually in connection with TRS. According to our most recent data, 97 companies reported that they were engaged in the provision of interexchange services.[3254] Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of IXCs that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 97 small entity IXCs that may be affected by the decisions and rules adopted in this Order.

1347. *Competitive Access Providers.* Neither the Commission nor SBA has developed a definition of small entities specifically applicable to providers of competitive access services (CAPs). The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of CAPs nationwide of which we are aware appears to be the data that we collect annually in connection with the TRS. According to our most recent data, 30 companies reported that they were engaged in the provision of competitive access services.[3255] Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of CAPs that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 30 small entity CAPs that may be affected by the decisions and rules adopted in this Order.

1348. *Operator Service Providers.* Neither the Commission nor SBA has developed a definition of small entities specifically applicable to providers of operator services. The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of operator service providers nationwide of which we are aware appears to be the data that we collect annually in connection with the TRS. According to our most recent data, 29 companies reported that they were engaged in the provision of operator services.[3256] Although it seems certain that some of these companies are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of operator service providers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 29 small entity operator service providers that may be affected by the decisions and rules adopted in this Order.

1349. *Pay Telephone Operators.* Neither the Commission nor SBA has developed a definition of small entities specifically applicable to pay telephone operators. The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of pay telephone operators nationwide of which we are aware appears to be the data that we collect annually in connection with the TRS. According to our most recent data, 197 companies reported that they were engaged in the provision of pay telephone services.[3257] Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of pay telephone operators that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 197 small entity pay telephone operators that may be affected by the decisions and rules adopted in this Order.

[3253] Federal Communications Commission, CCB, Industry Analysis Division, *Telecommunications Industry Revenue: TRS Fund Worksheet Data*, Tbl. 21 (Average Total Telecommunications Revenue Reported by Class of Carrier) (Feb. 1996) (*TRS Worksheet*).

[3254] *Id.*

[3255] *Id.*

[3256] *Id.*

[3257] *Id.*

1350. *Wireless (Radiotelephone) Carriers*. SBA has developed a definition of small entities for radiotelephone (wireless) companies. The Census Bureau reports that there were 1,176 such companies in operation for at least one year at the end of 1992.[3258] According to SBA's definition, a small business radiotelephone company is one employing fewer than 1,500 persons.[3259] The Census Bureau also reported that 1,164 of those radiotelephone companies had fewer than 1,000 employees. Thus, even if all of the remaining 12 companies had more than 1,500 employees, there would still be 1,164 radiotelephone companies that might qualify as small entities if they are independently owned are operated. Although it seems certain that some of these carriers are not independently owned and operated, we are unable at this time to estimate with greater precision the number of radiotelephone carriers and service providers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 1,164 small entity radiotelephone companies that may be affected by the decisions and rules adopted in this Order.

1351. *Cellular Service Carriers*. Neither the Commission nor SBA has developed a definition of small entities specifically applicable to providers of cellular services. The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of cellular service carriers nationwide of which we are aware appears to be the data that we collect annually in connection with the TRS. According to our most recent data, 789 companies reported that they were engaged in the provision of cellular services.[3260] Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of cellular service carriers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 789 small entity cellular service carriers that may be affected by the decisions and rules adopted in this Order.

1352. *Mobile Service Carriers*. Neither the Commission nor SBA has developed a definition of small entities specifically applicable to mobile service carriers, such as paging companies. The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of mobile service carriers nationwide of which we are aware appears to be the data that we collect annually in connection with the TRS. According to our most recent data, 117 companies reported that they were engaged in the provision of mobile

[3258] United States Department of Commerce, Bureau of the Census, *1992 Census of Transportation, Communications, and Utilities: Establishment and Firm Size*, at Firm Size 1-123 (1995) (*1992 Census*).

[3259] 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

[3260] *Id.*

services.[3261] Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of mobile service carriers that would qualify under SBA's definition. Consequently, we estimate that there are fewer than 117 small entity mobile service carriers that may be affected by the decisions and rules adopted in this Order.

1353. *Broadband PCS Licensees*. The broadband PCS spectrum is divided into six frequency blocks designated A through F. As set forth in 47 C.F.R. § 24.720(b), the Commission has defined "small entity" in the auctions for Blocks C and F as a firm that had average gross revenues of less than $40 million in the three previous calendar years. Our definition of a "small entity" in the context of broadband PCS auctions has been approved by SBA.[3262] The Commission has auctioned broadband PCS licenses in Blocks A, B, and C. We do not have sufficient data to determine how many small businesses bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the Block C auction. Based on this information, we conclude that the number of broadband PCS licensees affected by the decisions in this Order includes, at a minimum, the 90 winning bidders that qualified as small entities in the Block C broadband PCS auction.

1354. At present, no licenses have been awarded for Blocks D, E, and F of broadband PCS spectrum. Therefore, there are no small businesses currently providing these services. However, a total of 1,479 licenses will be awarded in the D, E, and F Block broadband PCS auctions, which are scheduled to begin on August 26, 1996. Eligibility for the 493 F Block licenses is limited to entrepreneurs with average gross revenues of less than $125 million.[3263] We cannot estimate, however, the number of these licenses that will be won by small entities under our definition, nor how many small entities will win D or E Block licenses. Given that nearly all radiotelephone companies have fewer than 1,000 employees[3264] and that no reliable estimate of the number of prospective D, E, and F Block licensees can be made, we assume for purposes of this FRFA, that all of the licenses in the D, E, and F Block Broadband PCS auctions may be awarded to small entities under our rules, which may be affected by the decisions and rules adopted in this Order.

[3261] *Id.*

[3262] *See Implementation of Section 309(j) of the Communications Act -- Competitive Bidding*, PP Docket No. 93-253, Fifth Report and Order, 9 FCC Rcd 5532, 5581-84 (1994).

[3263] *Amendment of Parts 20 and 24 of the Commission's Rules -- Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap*, WT Docket No. 96-59, *Amendment of the Commission's Cellular/PCS Cross-Ownership Rule*, Report and Order, GN Docket No. 90-314, FCC 96-278 (rel. June 24, 1996).

[3264] *1992 Census*, Table 5, Employment Size of Firms: 1992, SIC Code 4812.

1355. *SMR Licensees.* Pursuant to 47 C.F.R. § 90.814(b)(1), the Commission has defined "small entity" in auctions for geographic area 800 MHz and 900 MHz SMR licenses as a firm that had average annual gross revenues of less than $15 million in the three previous calendar years. This definition of a "small entity" in the context of 800 MHz and 900 MHz SMR has been approved by the SBA.[3265] The rules adopted in this Order may apply to SMR providers in the 800 MHz and 900 MHz bands that either hold geographic area licenses or have obtained extended implementation authorizations. We do not know how many firms provide 800 MHz or 900 MHz geographic area SMR service pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of less than $15 million. We assume, for purposes of this FRFA, that all of the extended implementation authorizations may be held by small entities, which may be affected by the decisions and rules adopted in this Order.

1356. The Commission recently held auctions for geographic area licenses in the 900 MHz SMR band. There were 60 winning bidders who qualified as small entities in the 900 MHz auction. Based on this information, we conclude that the number of geographic area SMR licensees affected by the rules adopted in this Order includes these 60 small entities. No auctions have been held for 800 MHz geographic area SMR licenses. Therefore, no small entities currently hold these licenses. A total of 525 licenses will be awarded for the upper 200 channels in the 800 MHz geographic area SMR auction. However, the Commission has not yet determined how many licenses will be awarded for the lower 230 channels in the 800 MHz geographic area SMR auction. There is no basis, moreover, on which to estimate how many small entities will win these licenses. Given that nearly all radiotelephone companies have fewer than 1,000 employees and that no reliable estimate of the number of prospective 800 MHz licensees can be made, we assume, for purposes of this FRFA, that all of the licenses may be awarded to small entities who, thus, may be affected by the decisions in this Order.

1357. *Resellers.* Neither the Commission nor SBA has developed a definition of small entities specifically applicable to resellers. The closest applicable definition under SBA rules is for all telephone communications companies. The most reliable source of information regarding the number of resellers nationwide of which we are aware appears to be the data that we collect annually in connection with the TRS. According to our most recent data, 206 companies reported that they were engaged in the resale of telephone services.[3266] Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500

[3265] *See Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool*, PR Docket No. 89-583, Second Order on Reconsideration and Seventh Report and Order, 11 FCC Rcd 2639, 2693-702 (1995); *Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band*, PR Docket No. 93-144, First Report and Order, Eighth Report and Order, and Second Further Notice of Proposed Rulemaking, 11 FCC Rcd 1463 (1995).

[3266] *TRS Worksheet, supra.*

employees, we are unable at this time to estimate with greater precision the number of resellers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 206 small entity resellers that may be affected by the decisions and rules adopted in this Order.

2. Cable System Operators (SIC 4841)

1358. SBA has developed a definition of small entities for cable and other pay television services, which includes all such companies generating less than $11 million in revenue annually. This definition includes cable systems operators, closed circuit television services, direct broadcast satellite services, multipoint distribution systems, satellite master antenna systems and subscription television services. According to the Census Bureau, there were 1,323 such cable and other pay television services generating less than $10 million in revenue that were in operation for at least one year at the end of 1992.[3267]

1359. The Commission has developed its own definition of a small cable system operator for the purposes of rate regulation. Under the Commission's rules, a "small cable company," is one serving fewer than 400,000 subscribers nationwide.[3268] Based on our most recent information, we estimate that there were 1,439 cable operators that qualified as small cable system operators at the end of 1995.[3269] Since then, some of those companies may have grown to serve over 400,000 subscribers, and others may have been involved in transactions that caused them to be combined with other cable operators. Consequently, we estimate that there are fewer than 1,468 small entity cable system operators that may be affected by the decisions and rules adopted in this Order.

1360. The Communications Act also contains a definition of a small cable system operator, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed $250,000,000."[3270] There were 63,196,310 basic cable subscribers at the end of 1995, and 1,450 cable system operators serving fewer than one percent (6[illegible],960) of subscribers.[3271] Although it seems certain that some of these

[3267] *1992 Census, supra,* Table 4 (Revenue Size of Firms: 1992), SIC 4841.

[3268] 47 C.F.R. § 76.901(e). The Commission developed this definition based on its determination that a small cable system operator is one with annual revenues of $100 million or less. *Implementation of Sections of the 1992 Cable Act: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393.

[3269] Paul Kagan Associates, Inc., *Cable TV Investor*, Feb. 29, 1996 (based on figures for Dec. 30, 1995).

[3270] 47 U.S.C. § 543(m)(2).

[3271] Paul Kagan Associates, Inc., *Cable TV Investor*, Feb. 29, 1996 (based on figures for Dec. 30, 1995).

cable system operators are affiliated with entities whose gross annual revenues exceed $250,000,000, we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under the definition in the Communications Act.

D. Summary Analysis of the Projected Reporting, Recordkeeping, and Other Compliance Requirements and Steps Taken to Minimize the Significant Economic Impact of this Report and Order on Small Entities and Small Incumbent LECs, Including the Significant Alternatives Considered and Rejected

1361. *Structure of the Analysis.* In this section of the FRFA, we analyze the projected reporting, recordkeeping, and other compliance requirements that may apply to small entities and small incumbent LECs as a result of this Order.[3272] As a part of this discussion, we mention some of the types of skills that will be needed to meet the new requirements. We also describe the steps taken to minimize the economic impact of our decisions on small entities and small incumbent LECs, including the significant alternatives considered and rejected.[3273] Due to the size of this Order, we set forth our analysis separately for individual sections of the item, using the same headings as were used above in the corresponding sections of the Order.

1362. We provide this summary analysis to provide context for our analysis in this FRFA. To the extent that any statement contained in this FRFA is perceived as creating ambiguity with respect to our rules or statements made in preceding sections of this Order, the rules and statements set forth in those preceding sections shall be controlling.

Summary Analysis of Section II
SCOPE OF THE COMMISSION'S RULES

1363. *Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements.* As discussed in Section II.E, a common carrier, which may be a small entity or a small incumbent LEC, may be subject to an action for relief in several different fora if a party believes that small entity or incumbent LEC violated the standards under section 251 or 252. Should a small entity or a small incumbent LEC be subjected to such an action for relief, it will require the use of legal skills.

1364. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* We believe that our actions establishing minimum national rules will facilitate the development of competition in the local exchange and exchange

[3272] *See* 5 U.S.C. § 604(a)(4).

[3273] *See* 5 U.S.C. § 604(a)(5).

access markets for the reasons discussed in Sections II.A and II.B above. For example, national rules may: help equalize bargaining power; minimize the need for duplicative marketing strategies and multiple network configurations; lower administrative costs; lessen the need to re-litigate the same issue in multiple jurisdictions; and reduce delay and transaction costs, which can pose particular burdens for small businesses. In addition, our rules are designed to accommodate differences among regions and carriers, and the reduced regulatory burdens and increased certainty produced by national rules may be expected to minimize the economic impact of our decisions for all parties, including any small entities and small incumbent LECs. As set forth in Section II.A above, we reject suggestions to adopt more, or fewer, national rules than we ultimately adopt in this Order. We reject the arguments that we should establish "preferred outcomes" from which parties could deviate upon an adequate showing, or that we establish a process by which state commissions could seek a waiver from the Commission's rules, for the reasons set forth in Section II.B above.

1365. We believe that our determination that there are multiple methods for bringing enforcement actions against parties regarding their obligations under sections 251 and 252 will assist all parties, including small entities and small incumbent LECs, by providing a variety of methods and fora for seeking enforcement of such obligations. (Section II.E - Authority to Take Enforcement Action.) Similarly, our conclusion that Bell Operating Company (BOC) statements of generally available terms and conditions are governed by the same national rules that apply to agreements arbitrated under section 252 should ease administrative burdens for all parties in markets served by BOCs, which may include small entities, because they will not need to evaluate and comply with different sets of rules. (Section II.F - BOC Statements of Generally Available Terms.) Finally, we decline to adopt different requirements for agreements arbitrated under section 252 and BOC statements of generally available terms and conditions for the reasons set forth in section II.F above.

Summary Analysis of Section III
DUTY TO NEGOTIATE IN GOOD FAITH

1366. *Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements.* Incumbent LECs, including small incumbent LECs that receive requests for access to network elements and/or services pursuant to sections 251 and 252 of the Act will be required to negotiate in good faith over the terms of interconnection agreements. As set forth in Section III.C. above, this Order identifies several practices as violations of the duty to negotiate in good faith, including: (1) a party's seeking or entering into an agreement prohibiting disclosure of information requested by the FCC or a state commission, or supplied in support of a request for arbitration pursuant to section 252(b)(2)(B); (2) seeking or entering into an agreement precluding amendment of the agreement to account for changes in federal or state rules; (3) an incumbent's denial of a reasonable request for cost data during negotiations; and (4) an entrant's failure to provide to the incumbent LEC information necessary to reach agreement. Complying with the projected requirements of this section may require the use of legal skills, as discussed above in

Section III.D. In addition, incumbent LECs and new entrants having interconnection agreements that predate the 1996 Act must file such agreements with the state commission for approval under section 252(e).

1367. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* As set forth above, we believe our decision to establish national rules and a review process concerning parties' duties to negotiate in good faith are designed to facilitate good faith negotiations, which should minimize regulatory burdens and the economic impact of our decisions for all parties, including small entities and small incumbent LECs. (Section III.B. - Advantages and Disadvantages of National Rules.) We also expect economic impacts to be minimized for small entities seeking to enter into agreements with incumbent LECs as a result of the decision that incumbent LECs may not impose a bona fide request requirement on carriers seeking agreements pursuant to sections 251 and 252. (Section III.C. - Specific Practices that may Constitute a Violation of Good Faith Negotiation.) For the reasons set forth in Section III.D. above, we also find that certain additional practices are not always violations of the duty to negotiate in good faith, including the suggested alternative that all nondisclosure agreements violate the good faith duty.

1368. We do not require immediate filing of preexisting interconnection agreements, including those involving small incumbent LECs and small entities. We set an outer time limit of June 30, 1997, by which preexisting agreements between Class A carriers must be filed with the relevant state commission. This decision will ensure that third parties, including small entities, are not prevented indefinitely from reviewing and taking advantage of the terms of preexisting agreements. It also limits burdens that a national filing deadline might impose on small carriers. In addition, the determination that preexisting agreements must be filed with state commissions seems likely to foster opportunities for small entities and small incumbent LECs to gain access to such agreements without requiring investigation or discovery proceedings or other administrative burdens that could increase regulatory burdens. (Section III.D. - Applicability of Section 252 to Preexisting Agreements). For the reasons set forth in Section III.D. above, we reject the alternative of not requiring certain agreements to be filed with state commissions.

Summary Analysis of Section IV
INTERCONNECTION

1369. *Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements.* Incumbent LECs, including small incumbent LECs, are required by section 251(c) to provide interconnection to all requesting telecommunications carriers for the transmission and routing of telephone exchange service and exchange access service. Such interconnection must be: (1) provided at any technically feasible point; (2) at least equal in quality to that provided to the incumbent LEC itself and to any other parties with interconnection agreements; and (3)

provided on rates, terms, and conditions that are "just, reasonable, and nondiscriminatory . . . ."[3274] As set forth in Section IV.A. above, we conclude that interconnection refers solely to the physical linking of networks for the mutual exchange of traffic, and identify a minimum set of technically feasible points of interconnection. The minimum points at which an incumbent LEC, which may be a small incumbent LEC, must provide interconnection are: (1) the line side of a local switch; (2) the trunk side of a local switch; (3) the trunk interconnection points for a tandem switch; (4) central office cross-connect points; and (5) out-of-band signaling facilities. In addition, the points of access to unbundled elements (discussed below) are also technically feasible points of interconnection. Compliance with these requests may require the use of engineering, technical, operational, accounting, billing, and legal skills.

1370. To obtain interconnection pursuant to section 251(c)(2), telecommunications carriers must seek interconnection for the purpose of transmitting and routing telephone exchange traffic, or exchange access traffic, or both. (Section IV.E. - Definition of "Technically Feasible.") This will require new entrants to provide either local exchange service or exchange access service to obtain section 251(c)(2) interconnection. A requesting carrier will be required to bear the additional costs imposed on incumbent LECs as a result of interconnection. (Section IV.F. - Technically Feasible Points of Interconnection.) Carriers seeking interconnection, including small entities, may be required to collect information to refute claims by incumbent LECs that the requested interconnection poses a legitimate threat to network reliability. (*Id.*)

1371. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* The decision to adopt clear national rules in this section of the Order is also intended to help equalize bargaining power between incumbent LECs and requesting carriers, expedite and simplify negotiations, and facilitate comprehensive business and network planning. This could decrease entry barriers and provide reasonable opportunities for all carriers, including small entities and small incumbent LECs, to provide service in markets for local exchange and exchange access services. (Section IV.B. - National Interconnection Rules). National rules should also facilitate the consistent development of standards and resolution of issues, such as technical feasibility, without imposing additional litigation costs on parties, including small entities and small incumbent LECs. We determine that successful interconnection at a particular point in a network creates a rebuttable presumption that interconnection is technically feasible at other comparable points in the network. (Section IV.E - Definition of "Technically Feasible.") We also identify minimum points of interconnection where interconnection is presumptively technically feasible: (1) the line side of a switch; (2) the trunk side of a switch; (3) trunk interconnection points at a tandem switch; (4) central office cross-connect points; and (5) out-of-band signaling facilities. (Section IV.F - Technically Feasible Points of Interconnection.) These decisions may be expected to facilitate negotiations by promoting certainty and reducing transaction costs, which should minimize regulatory burdens

[3274] 47 U.S.C. § 251(c)(2).

and the economic impact of our decisions for all parties, including small entities and small incumbent LECs. We decline, however, to identify additional points where interconnection is technically feasible for the reasons set forth in section IV.F above.

1372. The ability to enter local markets by offering only telephone exchange service or only exchange access service may minimize regulatory burdens and the economic impact of our decisions for some entrants, including small entities. We decline, however, to interpret section 251(c)(2) as requiring incumbent LECs to provide interconnection to carriers seeking to offer only interexchange services for the reasons set forth in section IV.D. above. In addition, we determine that an incumbent LEC may refuse to interconnect on the grounds that specific, significant, and demonstrable network reliability concerns may make interconnection at a particular point sufficiently infeasible. We further determine that the incumbent LEC must prove such infeasibility to the state commission. (Section IV.E - Definition of "Technically Feasible.")

1373. Competitive carriers, many of whom may be small entities, will be permitted to request interconnection at any technically feasible point, and the determination of feasibility must be conducted without consideration of the cost of providing interconnection at a particular point. (Section IV.E. - Definition of "Technically Feasible.") Consequently, our rules permit the party requesting interconnection, which may be a small entity, and not the incumbent LEC to decide the points that are necessary to compete effectively. (Section IV.E. - Definition of "Technically Feasible"). We decline, however, to impose reciprocal terms and conditions for interconnection on carriers requesting interconnection. Our decision that an party requesting interconnection must pay the costs of interconnecting should minimize regulatory burdens and the economic impact of our interconnection decisions for small incumbent LECs. Similarly, regulatory burdens and the economic impact of our decisions may be minimized through the decision that, while a requesting party is permitted to obtain interconnection that is of higher quality than that which the incumbent LEC provides to itself, the requesting party must pay the additional costs of receiving the higher quality interconnection. (Section IV.H - Interconnection that is Equal in Quality.)

Summary Analysis of Section V
ACCESS TO UNBUNDLED NETWORK ELEMENTS

1374. *Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements*. Under section 251(c), incumbent LECs are required to provide nondiscriminatory access to unbundled network elements. We identify a minimum set of network elements: (1) local loops; (2) local and tandem switches; (3) interoffice transmission facilities; (4) network interface devices; (5) signaling and call-related database facilities; (6) operations support systems and functions; and (7) operator and directory assistance facilities. (Section V.J - Specific Unbundling Requirements.) Incumbent LECs are required to provide nondiscriminatory access to operations support systems and information by January 1, 1997. States may require incumbent LECs to provide additional network elements on an unbundled basis. As discussed in Section V.F. above, LECs must perform the functions necessary to combine unbundled elements in a

manner that allows requesting carriers to offer a telecommunications service, and the incumbent LEC may not impose restrictions on the subsequent use of network elements. Compliance with these requests may require the use of engineering, technical, operational, accounting, billing, and legal skills.

1375. If a requesting carrier, which may be a small entity, seeks access to an incumbent LEC's unbundled elements, the requesting carrier is required to compensate the incumbent LEC for any costs incurred to provide such access. For example, in the case of operation support systems functions, such work may include the development of interfaces for competing carriers to access incumbent LEC functions for pre-ordering, ordering, provisioning, maintenance and repair, and billing. Requesting carriers may also have to deploy their own operations support systems interfaces, including electronic interfaces, in order to access the incumbent LEC's operations support systems functions. The development of interfaces may require new entrants, including small entities, to perform engineering work. (Section V.J.5 - Operations Support Systems Unbundling.)

1376. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* The establishment of minimum national requirements for unbundled elements should facilitate negotiations and reduce regulatory burdens and uncertainty for all parties, including small entities and small incumbent LECs. National requirements for unbundling may allow new entrants, including small entities, to take advantage of economies of scale in network design, which may minimize the economic impact of our decision. As set forth in Section V.B, above, we reject several alternatives in making this determination, including proposals suggesting that the Commission should: (1) not identify any required elements; (2) allow the states exclusively to identify required elements; or (3) adopt an exhaustive list of elements.

1377. As set forth above, the 1996 Act defines a network element to include "all facilit(ies) or equipment used in the provision of a telecommunications service," and all "features, functions, and capabilities that are provided by means of such facility or equipment, including subscriber numbers, databases, signaling systems and information sufficient for billing and collection or used in the transmission, routing or other provision of a telecommunications service." (Section V.C - Network Elements.) As a result, new entrants, which may include small entities, should have access to the same technologies and economies of scale and scope that are available to incumbent LECs. In reaching our determination, we reject for the reasons set forth in Section V.C above, the following alternatives: (1) that we should not adopt a method for identifying elements beyond those identified in the 1996 Act; and (2) that features sold directly to end users as retail services are not network elements. Finally, we reject the argument that requesting carriers, which may include small entities, are required to provide all services typically furnished by means of an element they purchase. (*Id.*) Our rejection of this last alternative may reduce burdens for some small entities by permitting them to offer some, but not all, of the services provided by the incumbent LEC.

1378. We conclude that the requirement to provide "access" to unbundled network elements is independent of the interconnection duty imposed by section 251(c)(2), and that such "access" must be provisioned under the rates, terms and conditions applicable to unbundled network elements. We believe these conclusions may provide small entities seeking to compete with incumbent LECs with the flexibility to offer other telecommunications services in addition to local exchange and exchange access services. (Section V.D. - Access to Network Elements.) For the reasons set forth above in Section V.D, we reject the argument that incumbent LECs are not required to provide access to an element's functionality, and that "access" to unbundled elements can only be achieved by interconnecting under the terms of section 251(c)(2).

1379. As set forth above, we conclude that an incumbent LEC, which may be a small incumbent LEC, may decline to provide a network element beyond those identified by the Commission where it can demonstrate that the network element is proprietary, and that the competing provider could offer the proposed telecommunications service using other nonproprietary elements within the incumbent's network. (Section V.E - Standards Necessary to Identify Unbundled Network Elements.) This should minimize regulatory burdens and the economic impact of our decisions for incumbent LECs, including small incumbent LECs, by permitting such entities to retain exclusive use of certain proprietary network elements.

1380. We conclude that incumbent LECs: (1) cannot impose restrictions, requirements or limitations on requests for, or the sale or use of, unbundled network elements; (2) must provide requesting carriers with all of the functionalities of a particular element so that requesting carriers :an provide any telecommunications services that can be offered by means of that element; '3) must permit new entrants to combine network elements which new entrants purchase access o, if so requested; (4) must prove to a state commission that they cannot combine elements that re not ordinarily combined within an their network, or that are not ordinarily combined in that ıanner, because such combination is not technically feasible or it would impair the ability of :her carriers to access unbundled elements and interconnect with the incumbent LEC; and (5) ust provide the operational and support systems necessary to purchase and combine network :ements. As a result of these conclusions, many small entities should face significantly reduced ırriers to entry in markets for local exchange services. (Section V.F - Provision of a :lecommunications Service Using Unbundled Network Elements.) For the reasons set forth in :tion V.F, we reject the following alternatives: (1) that incumbent LECs, in all instances, must nbine elements that are not ordinarily combined in their networks; and (2) that incumbent Cs are not obligated to combine elements for requesting carriers.

1381. By establishing minimum national rules concerning nondiscriminatory access to undled network elements, requesting carriers, including small entities, may face reduced saction and regulatory costs in seeking to enter local telecommunications markets. Among e minimum rules are: (1) access and elements which new entrants receive are to be equal in ity between carriers; (2) incumbent LECs must prove technical infeasibility; (3) the rates, s and conditions established for the provisioning of unbundled elements must be equal

between all carriers, and where applicable, between requesting carriers and the incumbent LEC itself, and they must provide efficient competitors with a meaningful opportunity to compete; and (4) incumbent LECs must provide carriers purchasing unbundled elements with access to electronic interfaces if incumbents use such functions themselves in provisioning telecommunications services. (Section V.G - Nondiscriminatory Access to Unbundled Network Elements.)

1382. As set forth above, we conclude that section 251(c)(3) does not require new entrants to own or control their own local exchange facilities in order to purchase and use unbundled network elements and, thus, new entrants can provide services solely by recombining unbundled network elements. (Section V.H - The Relationship Between Sections 251(c)(3) and 251(c)(4).)

1383. As discussed in Section V.J above, we adopt a minimum list of required unbundled network elements that incumbent LECs, including small incumbent LECs, must make available to requesting carriers. In adopting this list, we sought to minimize the regulatory burdens and economic impact for small incumbent LECs. For example, we declined to adopt a detailed list including many additional elements, as set forth in Section V.B. We aiso provided for the fact that certain LECs may possess switches that are incapable of performing customized routing for competitors, as discussed in Section V.J.2.(c).(ii).

Summary Analysis of Section VI
METHODS OF OBTAINING INTERCONNECTION AND ACCESS TO UNBUNDLED NETWORK ELEMENTS

1384. *Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements.* We conclude that Section 251(c)(6) requires incumbent LECs, including small incumbent LECs, to provide for any technically feasible method of interconnection or access to unbundled network elements, including physical collocation, virtual collocation, and meet-point interconnection. With certain modifications, we adopt some of the requirements concerning physical and virtual collocation that we adopted in the *Expanded Interconnection* proceeding. Compliance with these requests may require the use of engineering, technical, operational, accounting, billing, and legal skills.

1385. In a meet-point arrangement the new entrant will build out facilities to the agreed-upon point, which will likely entail the use of engineering and installation personnel as well as the acquisition of equipment. We allow incumbent LECs to impose reasonable restrictions on the warehousing of space by collocators. Therefore, small entities collocating equipment may be required to use the provided space for the collocation of equipment necessary for interconnection or access to unbundled network elements or risk losing the right to use that space. (Section VI.B.1.e - Allocation of Space.) To take advantage of its right to collocate equipment on an incumbent LEC's premises, competitive entrants, which may include small entities, will be

required to build or lease transmission facilities between their own equipment, located outside of the incumbent LECs' premises, and the collocated space. (Section VI.B.1.f - Leasing Transport Facilities.) We allow incumbent LECs to require reasonable security arrangements to separate an entrant's collocation space from the incumbent LEC's facilities. Small entities collocating equipment may therefore be required to pay for such security arrangements. (Section VI.B.1.h - Security Arrangements.)

1386. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* By readopting our *Expanded Interconnection* terms and conditions, which allow competitors to collocate equipment for interconnection with the incumbent LEC, regulatory burdens have likely been reduced because the terms and conditions for collocation have already been established. (Section VI.B.1.b - Adoption of *Expanded Interconnection* Terms and Conditions.) This seems likely to benefit all parties, including small entities and small incumbent LECs, since it should reduce the time and expense of negotiation, and reduce the costs of adapting to new terms and conditions for collocation.

1387. Due to our conclusion that requesting carriers may choose any method of technically feasible interconnection or access to unbundled elements, new entrants, including small entities, should have the flexibility to obtain interconnection or access in the manner that best suits their needs. (Section VI.A. - Methods of Obtaining Interconnection and Access to Unbundled Elements.) In particular, as discussed in Section VI.A.3, we recognize that carriers, including small entities, may find virtual collocation or meet-point arrangements more efficient than physical collocation in certain circumstances, particularly if they lack the resources to collocate physically in a large number of incumbent LEC premises.

1388. We adopt a broad definition of the term "premises," which should allow carriers, including small entities, to collocate equipment for interconnection and access to unbundled network elements at a range of incumbent LEC locations. (Section VI.B.1.c - The Meaning of the Term "Premises.") For the reasons set forth in Section VI.B above, we interpret the term "premises" broadly to include incumbent LEC central offices, serving wire centers and tandem offices, as well as all buildings or similar structures owned or leased by the incumbent LEC that house incumbent LEC facilities. However, as set forth above, we reject the suggestion that security measures be provided only at the request of the entrant, which should minimize regulatory burdens and the economic impact of our decisions for small incumbent LECs. (*Id.*)

1389. We interpret the statute broadly to allow collocation of any equipment used for interconnection or access to unbundled network elements. (Section VI.B.1.d - Collocation Equipment.) This standard should offer all competitors, including small entities, flexibility in collocating equipment they need to interconnect their networks to those of incumbent LECs. Incumbent LECs will also be required to make space available to requesting carriers on a first-come, first-served basis, and collocators seeking to expand their collocated space should be allowed to use contiguous space where available. (Section VI.B.1.e - Allocation of Space.)

These provisions should minimize regulatory burdens and economic impacts for small entity entrants by reducing opportunities for discriminatory treatment based on the size of the requesting carrier. We decline, however, to require incumbent LECs to file reports on the status, planned increase, and use of space for the reasons set forth in Section VI.B.1. above, which will reduce the regulatory burdens and economic impact of our decisions for small incumbent LECs.

1390. We conclude that a competitive entrant should be permitted to lease transmission facilities from the incumbent LEC. (Section VI.B.1.f - Leasing Transport Facilities). This provision will allow small entities to lease transmission facilities from incumbent LECs to transmit traffic between the collocated space and their own networks, which may be comparatively less burdensome for small entities than the alternative of bringing their own facilities to the collocated equipment on the incumbent LEC's premises. We also require incumbent LECs to permit two or more carriers that are collocating at the incumbent LEC's premises to interconnect their networks. (Section VI.B.1.g - Co-Carrier Cross-Connect.) This requirement should make it easier for new entrants to interconnect their networks with those of competitors.

1391. We require incumbent LECs to provide the relevant state commissions with detailed floor plans or diagrams of any premises where the incumbent LEC alleges that there are space constraints. (Section VI.B.1.i. - Allowing Virtual Collocation in Lieu of Physical). This requirement may reduce burdens for all parties, including small entities and small incumbent LECs, by aiding state commissions with their evaluation of incumbent LEC refusals to allow physical collocation on the grounds of space constraints. For the reasons set forth in Section VI.B.1 above, however, we decline to require incumbent LECs to lease additional space or provide trunking at no cost where they have insufficient space for physical collocation, which should minimize the regulatory burdens and economic impact of our decisions for incumbent LECs, including small incumbent LECs.

Summary Analysis of Section VII
PRICING OF INTERCONNECTION
AND UNBUNDLED NETWORK ELEMENTS

1392. *Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements.* Pursuant to sections 251(c) and 252(d) of the 1996 Act, incumbent LECs must provide interconnection and access to unbundled network elements on rates, terms, and conditions that are just, reasonable, and nondiscriminatory. In Section VII above, we adopt a methodology for setting arbitrated prices for interconnection and unbundled elements on the basis of forward-looking economic cost studies prepared in conformance with a methodology prescribed by the Commission. Until states utilize economic studies to develop cost-based prices, they must use default proxies established by the Commission. Small incumbent LECs may be required, therefore, to prepare economic cost studies. In addition, small entities seeking arbitration for rates for interconnection or unbundled elements may find it useful to prepare economic cost

studies or prepare critiques of cost studies prepared by incumbent LECs and others. In both cases, this may entail the use of economic experts, legal advice, and possibly accounting personnel.

1393. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* Our conclusion that prices for interconnection and unbundled elements should be set at forward-looking long-run economic cost, including a reasonable share of forward-looking joint and common costs, should permit new entrants, including small entities, to interconnect with, and acquire unbundled elements from, incumbent LECs at prices that replicate, to the extent possible, those in a competitive market. (Section VII.B.2 - Pricing of Interconnection and Unbundled Elements, Cost-Based Pricing Methodology, Rate Levels.) Our forward-looking economic cost methodology for determining prices is designed to permit incumbent LECs to recover their economic costs of providing interconnection and unbundled elements, which should minimize the economic impact of our decisions on small incumbent LECs.

1394. Our conclusion that embedded costs, opportunity costs and universal service subsidies may not be included in the rates for interconnection and unbundled elements is intended, in part, to avoid distortions in investment decisions, which should lead to more efficient allocation of resources, thereby reducing regulatory burdens and economic impacts for some small entities and small incumbent LECs. (Section VII.B.2 - Pricing of Interconnection and Unbundled Elements, Cost-Based Pricing Methodology, Rate Levels.) We reject proposals that would have permitted incumbent LECs to recover their embedded costs in prices for interconnection and unbundled elements as discussed above in Section VII.B.2.a.(3)(b). As discussed in Section VII.B.2.a.(3)(b), we reject the use of the efficient component pricing rule (ECPR) to set prices for interconnection and unbundled elements.

1395. Our conclusion that forward-looking common costs should be allocated in a reasonable manner should ensure that the prices of network elements that are least likely to be subject to competition are not artificially inflated by large allocations of common costs. This, in turn, may also produce more efficient allocations of resources, thereby minimizing regulatory burdens and economic effects for many parties, including small entities and small incumbent LECs. (Section VII.B.2 - Pricing of Interconnection and Unbundled Elements, Cost-Based Pricing Methodology, Rate Levels.) We permit, but do not require, states to impose peak-sensitive pricing systems for shared facilities as discussed in Section VII.B.3.b.

1396. We conclude that incumbent LECs should not recover access charges from entrants that use unbundled network facilities to provide access services to customers that they win from incumbent LECs. We do, however, permit incumbent LECs to impose on purchasers of unbundled local switching the carrier common line charge and a charge equal to seventy-five percent of the transport interconnection charge for an interim period that shall end no later than June 30, 1997, as discussed in Section VII.B.2.a.(3)(b). As further explained in that section, this

mechanism should serve to reduce any short-term disruptive impact of our decisions on incumbent LECs, including small incumbent LECs.

1397. We conclude that the Act requires rates for interconnection and unbundled elements to be geographically deaveraged, using a minimum of three geographic zones, in a manner that appropriately reflects the costs of the underlying elements. (Section VII.B.3.c. - Geographic/Class-of-Service Averaging.) We also conclude that distinctions between the rates charged to requesting carriers for network elements should not vary based on the classes of service that the requesting carriers provide to their to customers. We expect these decisions to lead to increased competition and a more efficient allocation of resources.

1398. The default proxies we adopt for rates for interconnection and unbundled elements, which states may use to establish prices, are designed to approximate prices that will enable efficient competitors, including small entities, to enter local exchange markets. (Section VII.C. - Default Proxy Ceilings and Ranges.) We reject the use of rates in interconnection agreements that predate the 1996 Act as proxy-based ceilings for interconnection and unbundled element rates as discussed in Section VII.C.1. We also decline to adopt a generic cost model at this time, as discussed in Section VII.C.3.

1399. We determine that the nondiscrimination provisions in the Act prohibit price differences that are not based on cost differences. This should permit small entities to obtain the same terms and conditions of agreements reached by larger carriers that possess greater bargaining power without having to incur the costs of negotiation and/or arbitration. (Section VII.D.3 - Discrimination.)

Summary Analysis of Section VIII
RESALE

1400. *Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements.* Pursuant to section 251(b)(1), all LECs, which may include small entity competing LECs and small incumbent LECs, may not impose unreasonable or discriminatory conditions on, or limit the resale of, their telecommunications services. Pursuant to section 251(c)(4), incumbent LECs are required to offer for resale at wholesale rates any telecommunications services that they offer to subscribers other than telecommunications carriers. Providing such services for resale may require some small entities and small incumbent LECs to use additional billing, technical, and operational skills.

1401. Under section 252(a), resellers, which may include small entities, are required to prepare and present to incumbent LECs requests for services to resell. We do not establish guidelines for the content of these requests. Such requests may involve legal, engineering, and accounting skills. Resellers may also have to engage in arbitration proceedings with incumbent LECs if voluntary negotiations resulting from the initial request fail to yield an agreement. This

may involve legal and general negotiation skills. Where a reseller is negotiating or arbitrating with an incumbent LEC, the reseller may choose to offer arguments concerning economic and accounting data presented by state commissions or incumbent LECs. Resellers may also choose to make legal and economic arguments that certain resale restrictions are unreasonable. These tasks may require legal, economic, and accounting skills.

1402. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* As set forth in Section VIII.B, above, our decision to adopt clear national rules should reduce regulatory burdens and uncertainty for all parties, including small entities and small incumbent LECs. Moreover, our decision not to impose eligibility requirements on resellers should minimize regulatory burdens for resellers. We reject proposals that the Commission not require resale of bundled service offerings, promotions and discounts lasting longer than 90 days, residential service, and services offered at rates below cost for reasons set forth in Section VIII.A.

1403. As discussed in Section VIII.B, we expect that the opportunity to resell telecommunications services currently offered exclusively by incumbent LECs will lead to increased competition in the provision of telecommunications services. We also determine that non-cost-based factors shall not be considered when arriving at wholesale discounts, and we reject the argument that indirect costs should not be considered avoided costs. We also reject proposals that we either require or forbid a state to include a measure of profit in its avoided cost calculation. As set forth in Section VIII.B, we considered the concerns of small incumbent LECs and small entity resellers when adopting the default range for wholesale discounts. In addition, we allow a state to consider including in wholesale rates the costs that incumbent LECs incur in selling services on a wholesale basis, which may minimize the economic impact for small incumbent LECs.

1404. As discussed in Section VIII.C, we remove obstacles faced by small businesses in reselling telecommunications services by establishing a presumption, applicable to incumbent and non-incumbent LECs, that most restrictions on resale are unreasonable. This presumption should reduce unnecessary burdens on resellers, which may include small entities. It may also produce increased opportunities for resale competition, which may be expected to be beneficial for some small entities and small incumbent LECs. We do not permit state commissions to require non-incumbent LECs to offer their services at wholesale rates for the reasons set forth Section VIII.D. For the reasons discussed in Section VIII.C, above, we decline to forbear from the application of section 251(b)(1) to non-incumbent LECs. We also conclude that incumbent LECs are to continue to receive access charge revenues when local services are resold under section 251(c)(4) for reasons set forth in Section VIII.E, and that such access services are not subject to resale at wholesale rates for reasons set forth in Section VIII.A.

Summary Analysis of Section IX
DUTIES IMPOSED ON "TELECOMMUNICATIONS CARRIERS" BY SECTION 251(a)

1405. *Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements.* Small entities that provide telecommunications services are subject to the same obligations imposed on all telecommunications carriers under section 251(a)(1) and section 251(a)(2), and any reporting requirements that attend such obligations. Among these duties is the duty to interconnect, directly or indirectly, with requesting telecommunications carriers. (Section IX - Duties Imposed on "Telecommunications Carriers" By Section 251(a).) This will likely require small entities to comply with the technical, economic, and legal requirements involved with interconnection, including negotiating contracts, utilizing engineering studies, and adding operational capacity. (*Id.*) Small incumbent LECs may incur similar compliance requirements to the extent they are required to interconnect with entities that qualify as "telecommunications carriers."

1406. Small incumbent LECs and small entities providing telecommunications services will also be under a duty not to install network features, functions, and capabilities that do not comply with standards and guidelines under sections 255 and 256. (Section IX - Duties Imposed on "Telecommunications Carriers" By Section 251(a)(2).) In addition, small entities that provide both information services and telecommunications services are classified as telecommunications carriers and are subject to certain requirements under 251(a). (Section IX - Duties Imposed on "Telecommunications Carriers" By Section 251(a)(2).)

1407. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* Small entities who provide for a fee local, interexchange and international services are defined as telecommunications carriers and, thus, also receive the benefits of section 251 including interconnection, services, and network elements, which may increase their ability to compete. (Section IX - Duties Imposed on "Telecommunications Carriers" By Section 251(a)(2).) We reject the suggestion that CMRS providers, some of which likely are small entities, should not be included in the definition of a "telecommunications carrier." (*Id.*) We determine that entities operating private, internal or shared communications networks do not qualify as telecommunications carriers, however, which excludes them from the obligations and benefits under section 251(a). Small entities providing information services but not telecommunications services are also not classified as telecommunications carriers and, thus, will not be bound by the duties of section 251(a). A carrier that provides both information and telecommunications services is deemed subject to the requirements of section 251(a). We also conclude that telecommunications carriers that have interconnected under either section 251(a)(1) or 251(c)(2) may offer information services through the same arrangement or agreement. This will permit new entrants, many of which may be small entities, to offer full ranges of services to end users without having to provide some of those services inefficiently through distinct facilities or agreements.

1408. We decide that competitive telecommunications carriers that have the obligation to interconnect with requesting carriers may choose, based upon their own characteristics, whether to allow direct or indirect interconnection. (Section IX - Duties Imposed on "Telecommunications Carriers" By Section 251(a).) This should allow significant flexibility for small entities to choose the most efficient and economical arrangement for their particular strategy. As set forth in Section IX, we reject an argument to forbear, under section 10 of the Communications Act,[3275] from imposing any interconnection requirements on non-dominant carriers.

Summary Analysis of Section X
COMMERCIAL MOBILE RADIO SERVICES

1409. *Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements.* We are applying sections 251 and 252 to LEC-CMRS interconnection at this time. (Section X.D - Jurisdictional Authority for Regulation of LEC-CMRS Interconnection Rates.) We may revisit our determination not to invoke jurisdiction under section 332 to regulate LEC-CMRS interconnection rates if we determine that the regulatory scheme established by sections 251 and 252 does not sufficiently address the problems encountered by CMRS providers, many of which may be small entities, in obtaining interconnection on terms and conditions that are just, reasonable, and nondiscriminatory.

1410. Pursuant to our findings in Section X.D, a small CMRS entity seeking to enter into a reciprocal compensation agreement with an incumbent LEC, which may be a small incumbent LEC, will have to comply with sections 251 and 252, and state law. The reporting, recordkeeping, and other compliance requirements associated with reciprocal compensation are summarized in the following section concerning obligations under section 251(b).

1411. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* The Commission's actions may minimize the economic impact on CMRS providers, many of which are small entities, by declaring that CMRS providers are not required to comply with the obligations of LECs under section 251(b)(5). We decline to adopt the alternative of finding that a CMRS provider is a LEC for the reasons set forth in Section X.A. We also determine that CMRS providers are entitled to request reciprocal compensation under section 251(b)(5), and that certain CMRS providers are also entitled to request interconnection under section 251(c)(2). As discussed in the following section concerning obligations under section 251(b), these decisions may permit small entity CMRS providers the opportunity to considerably expand their businesses.

Summary Analysis of Section XI
OBLIGATIONS IMPOSED ON LECS BY 251(b)

[3275] 47 U.S.C. § 160.

A. Reciprocal Compensation for Transport and Termination of Telecommunications

1412. *Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements.* All local exchange carriers, including small incumbent LECs and perhaps some small entities offering competing local exchange services, have a duty to establish reciprocal compensation for the transport and termination of local telecommunications traffic, as defined by state commissions. As such, small incumbent LECs and small entities offering competitive local exchange services may be required to measure the exchange of traffic, and to bill and collect payment from other carriers. (Section XI.A - Reciprocal Compensation for Transport and Termination of Telecommunications.) Reciprocal compensation for the transport and termination of traffic may be based on the incumbent LEC's cost studies, which may require small incumbent LECs to use economic skills to perform cost studies. To the extent that a competing provider of local exchange services, which may include a small entity, believes its costs for the transportation and termination of traffic differ from those of the incumbent LEC, it would also be required to provide a forward-looking, economic cost study. (*Id.*)

1413. If a CMRS provider entered into an agreement with an incumbent LEC prior to August 8, 1996 that does not provide for mutual compensation, the CMRS provider may demand to renegotiate the agreement. This may impose the burden of re-negotiation on small incumbent LECs, which may require legal, accounting, and economic skills. In addition, pending the successful completion of negotiation or arbitration, symmetrical reciprocal compensation shall apply, which may have the effect of raising the amount small incumbent LECs currently pay CMRS providers to terminate LEC-originated traffic. This may have the effect of increasing small incumbent LECs' costs. Finally, a state commission may impose bill-and-keep arrangements between carriers if the state commission determines that the amount of local telecommunications traffic from one network to the other is approximately equal to the amount of local telecommunications traffic flowing in the opposite directions, and is expected to remain thus. This could have the effect of reducing small incumbent LECs' revenues and decreasing the expenses of small entities. It also might place a burden on small entities and small incumbent LECs of establishing that traffic volumes are imbalanced, which might require accounting, economic, and legal skills.

1414. We require paging companies seeking to recover fees for terminating local calls to demonstrate to the state the costs of terminating such calls. (Section XI.A. - Reciprocal Compensation for Transport and Termination of Traffic.) Consequently, small entity paging companies and possibly small incumbent LECs may be required to use legal, economic, and possibly accounting skills.

1415. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* Our adoption of national default price ceilings and ranges for transportation and termination of local traffic being arbitrated by the states should

provide all parties, including small incumbent LECs and many new entrant small entities, with a clear understanding of the terms and conditions that will govern should they fail to reach an agreement. This should minimize regulatory burdens and economic impacts for those companies, in part by reducing the transaction costs of arbitration. (Section XI.A.3.c.(4) - Default Proxies.) Permitting CMRS providers with non-reciprocal agreements to renegotiate their agreements, and imposing symmetrical reciprocal compensation pending completion of negotiation or arbitration, will provide all parties with certainty as to applicable rates as of the date of this order, and minimize litigation and regulatory costs. We believe this decision is consistent with the pro-competitive goals of the 1996 Act.

1416. We define transport and termination as separate functions -- each with its own cost calculation for the purposes of sections 251 and 252. This definition may permit interconnecting carriers, including small entities, to obtain transport and termination services at lower rates and avoid paying above-cost rates or rates for unneeded services. (Section XI.A.2 - Definition of Transport and Termination of Telecommunications.) We also conclude that a LEC may not charge a CMRS provider or other carrier, which may be a small entity, for receiving and terminating LEC-originated traffic. (Section XI.A.4 - Symmetry.) We do not permit interexchange carriers to use transport and termination services to avoid the obligation to pay access charges for terminating interexchange traffic with incumbent LECs. (Section XI.A.2 - Definition of Transport and Termination of Telecommunications.)

1417. Our decision to permit new entrants to base reciprocal compensation arrangements on incumbent LECs' cost studies may reduce barriers to entry by permitting competing LECs to avoid performing their own forward-looking, economic cost studies, which may be expected to reduce the overall burdens and minimize the economic impact of regulation on these small entities. (Section XI.A.4 - Symmetry.) The ability of state commissions to impose bill and keep arrangements where the costs of terminating traffic are nearly symmetrical, traffic volume is roughly balanced, and both are expected to remain so, may allow small entities and small incumbent LECs to avoid the cost of measuring traffic exchange. (Section XI.A.5 - Bill and Keep.) For the reasons set forth in Section XI.A.5 above, we reject the proposed alternative of permitting states to adopt bill-and-keep arrangements for the transport and termination of traffic where the cost of terminating traffic is not nearly symmetrical.

1418. By requiring that rates for transport and termination be cost based, we believe that all parties in telecommunications markets, including small incumbent LECs and small entities, may benefit from increased opportunities to compete effectively in local exchange markets. (Section XI.A.3 - Pricing Methodology.) In addition, we conclude that termination rates for LECs, including small incumbent LECs, should include an allocation of forward-looking common costs, but not an element for the recovery of lost contributions. These decisions may be expected to minimize the economic impact of our decisions on small incumbent LECs and small entities.

1419. This Order eliminates certain charges paging companies may now be assessed by LECs and enables paging companies to claim new revenues from LECs for terminating paging calls. (Section XI.A - Reciprocal Compensation for Transport and Termination of Traffic.) Paging companies, including small entities, may thereby incur lower costs. Such entities also may increase their revenues, depending on the outcome of any proceedings concerning their termination costs. For the reasons set forth in Section XI.A.3 above, we cannot conclude, at this time, that a LEC's forward looking costs may be used as a reasonable proxy for the costs of call termination by paging providers. We further conclude that the default price for termination of traffic from the end office that we adopt in this proceeding in Section XI.A.3 above does not apply to termination of traffic by paging providers. This default price is based on estimates in the record of the costs to LECs of termination from the end office or end-office switching.

B. Access to Rights-of-Way

1420. *Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements.* Small incumbent LECs that meet the definition of a utility[3276] and own poles, ducts, conduits and rights-of-way where access was not previously mandated are now required to provide access to requesting telecommunications carriers (other than incumbent LECs and cable television systems) which may require the use of legal, engineering, and accounting resources for evaluation and processing of attachment requests. (Section XI.B.2 - Section 224(f): Non-discriminatory Access.) This may also require small incumbent LECs and small entities to employ technical personnel to modify pole attachment arrangements.

1421. A complaint of unjustified denial of access must be supported by a written request for access, the utility's response, and information supporting the complainant's position. This will likely impose some recordkeeping requirements on small incumbent LECs and small entities seeking access to rights-of-way. Our requirements may also impose administrative requirements, including legal and engineering expertise, on small governmental jurisdictions[3277] that resolve disputes arising under section 224 of the Communications Act. (Section XI.B.5 - Dispute Resolution.) In addition, small governmental jurisdictions that have established rules and regulations for access to poles, ducts and conduits specifically, and interconnection generally, are also likely to have some level of reporting and recordkeeping requirements for competing telecommunications carriers that use the poles, some of which may be small entities. (Section XI.B.6 - Reverse Preemption.)

[3276] The Act defines "utility" as "any person who is a local exchange carrier or an electric, gas, water, steam, or other public utility, and who owns or controls poles, ducts, conduits, or rights-of-way used, in whole or in part, for any wire communication." 47 U.S.C. § 224(a)(1).

[3277] Under the Regulatory Flexibility Act, a "small governmental jurisdiction" is one type of "small entity," and is defined as the "governments of cities, counties, towns, townships, villages, school districts, or special districts with a population of less than fifty thousand . . . ." 5 U.S.C. § 601(5).

1422. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* In placing the burden of proof on the denying utility with respect to the propriety of a denial of access, we recognize that new entrants, which may be small entities, are not likely to have access to such information without cooperation from the utilities. Complaints should not be dismissed where the petitioner was unable to obtain a written response from the denying utility, or where the utility also denied the petitioner any relevant information needed to establish a prima facie case. These provisions should allow an entrant to pursue a claim without the need for expensive discovery, and should not preclude or discourage entities with limited resources from seeking redress where access is denied. (Section XI.B.5 - Dispute Resolution.) For the reasons set forth in Section XI.B.5, we reject the recommendation that an applicant be allowed to seek injunctive relief in federal court and select federal jurisdiction for enforcement or appeal of any matter regarding pole attachments. Our conclusion that state and local pole attachment requirements are presumed reasonable may minimize burdens on small governmental jurisdictions by preserving existing rules and procedures, and the local government's expertise with its own rules. (Section XI.B.2.c.2. - Specific Rules.) In reaching this result, we reject the alternative of invalidating such state regulations in favor of federal rules for the reasons stated in Section XI.B.2. Our determination not to prescribe numerous specific rules in this area recognizes the varying technologies and facilities deployed by incumbent LECs, including small incumbent LECs. For example, we recognize that utilities, including small incumbent LECs, normally have their own operating standards that dictate conditions of access. Thus, we leave in place such conditions of access. For the reasons set forth in Section XI.B., we reject the alternative of prescribing a comprehensive set of substantive engineering standards governing access to rights-of-way.

1423. When an attaching entity modifies poles for its use, it will be entitled to recover a share of its expenses from any later-attaching entities. (Section XI.B.4 - Modifications.) This should permit attaching entities that modify poles, some of which may be small entities, to bear only their proportionate costs and prevent them from effectively subsidizing their later-entering competitors. The requirement that utilities provide attaching entities with 60 days' notice prior to commencing modifications to any pole, duct or conduit should provide attaching entities, some of which may be small entities, with sufficient time to evaluate the impact of the proposed modification on their interests and to plan and coordinate any modifications to their own attachments. (*Id.*)

C. Imposing Additional Obligations on LECs

1424. *Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements.* Our decisions in this section of the Order do not subject any small entities to reporting, recordkeeping or other compliance requirements.

1425. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* The determination that the 1996 Act does not

permit the particular obligations for incumbent LECs set forth in section 251(c) to be imposed on non-incumbent carriers, absent a finding by the Commission under section 251(h)(2), should limit potential burdens on new entrants, including small entities. (Section XI.C - Imposing Obligations on LECs.)

Summary Analysis of Section XII
EXEMPTIONS, SUSPENSIONS AND
MODIFICATIONS OF SECTION 251 REQUIREMENTS

1426. *Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements.* Section 251(f)(1) grants rural telephone companies, which may be small incumbent LECs, an exemption from the requirements of section 251(c) (which only apply to incumbent LECs) until the rural telephone company has received a bona fide request for interconnection, services, or network elements, and the state determines that the exemption should be terminated. Section 251(f)(2) provides that LECs with fewer than two percent of the nation's subscriber lines may petition a state commission for a suspension or modification of any requirements of sections 251(b) and 251(c). The latter provision, section 251(f)(2), is available to all LECs including competitive LECs, which may be small entities.

1427. After a carrier has made a bona fide request under Section 251, a rural telephone company, which may be a small incumbent LEC, seeking to retain its exemption under section 251(f)(1) must prove to the state commission that it should retain its exemption. To remove the exemption, a state commission must find that the bona fide interconnection request is not unduly economically burdensome, is technically feasible, and is consistent with section 254. The parties involved in such a proceeding may need to use legal, accounting, economic and/or engineering services. A small incumbent LEC or a competitive LEC, which may be a small entity, seeking under 251(f)(2) to modify or suspend the national interconnection requirements imposed by section 251(b) or 251(c) bears the burden of proving that interconnection would: (1) create a significant adverse economic impact on telecommunications users; (2) be unduly economically burdensome; or (3) be technically infeasible.

1428. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* As set forth in Section XII above, the determination whether a section 251(f) exemption, suspension, or modification should be continued or granted lies primarily with the relevant state commission. By largely leaving this determination to the states, our decisions permit this fact-specific inquiry to be administered in a manner that minimizes regulatory burdens and the economic impact on small entities and small incumbent LECs. However, to further minimize regulatory burdens and minimize the economic impact of our decision, we adopt several rules as set forth in Section XII above, which may facilitate the efficient resolution of such inquiries, provide guidance, and minimize uncertainty. As set forth in Section XII above, we find that the rural LEC or smaller LEC must prove to the state commission that the financial harm shown to justify an exemption, suspension, or

modification would be greater than the harm that might typically be expected as a result of competition. Finally, we conclude that section 251(f) adequately provides for varying treatment for smaller or rural LECs where such variances are justified. As a result, we expect that section 251(f) will significantly minimize regulatory burdens and economic impacts from the rules adopted in this Order.

Summary Analysis of Section XIII
ADVANCED TELECOMMUNICATIONS CAPABILITIES

1429. *Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements.* Our decision to defer consideration of rules in this section of the Order does not subject any small entities or small incumbent LECs to reporting, recordkeeping or other compliance requirements.

1430. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* We do not anticipate that our decision to defer consideration of rules in this section of the Order will have any economic impact on small entities or small incumbent LECs.

Summary Analysis of Section XIV
PROVISIONS OF SECTION 252

A. Section 252(e)(5)

1431. *Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements.* Pursuant to section 252(b)(1), a party to negotiation may petition a state commission to arbitrate any open issues. Small entities and small incumbent LECs negotiating interconnection agreements may, therefore, participate in state arbitration in order to obtain an interconnection agreement, which may impose significant legal costs. (Section XIV.A - Section 252(e)(5).) Section 252(e)(5) requires the Commission to assume the state's responsibility under section 252 if the state "fails to act to carry out its responsibility" under the section. We require an aggrieved party, which may be a small entity or a small incumbent LEC, to notify the FCC that a state commission has failed to act under section 252 by filing a detailed written petition, backed by affidavit. As set forth above in Section XIV.A, if the Commission, following a notice and comment period, determines that the state has failed to act, the Commission will assume authority under section 252(e)(5) and mediate or arbitrate the dispute. This process may also entail significant legal expertise.

1432. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* In this Order, the Commission adopts a minimum set of rules that will provide notice of the standards and procedures that the Commission will use if it has to assume the responsibility of a state commission under section 252(e)(5). These rules

should benefit small entities and small incumbent LECs by limiting uncertainty and minimizing transaction costs associated with the arbitration process. (Section XIV.A - 252(e)(5).)

1433. The Commission concludes that, if it arbitrates agreements, it will use a "final offer" arbitration method, whereby each party to the arbitration proposes its best and final offer, and the arbitrator chooses between the proposals. The arbitrator may choose either proposal in its entirety, or could choose different parties' proposals on an issue-by-issue basis. This method of arbitration should minimize the economic impact on small entities and small incumbent LECs by reducing the transaction costs associated with arbitration. Our rules should also encourage parties, to negotiate after offers are submitted which should provide additional flexibility for parties including small entities and small incumbent LECs, to agree to a resolution tailored to their interests. (Section XIV.A - 252(e)(5).)

1434. For the reasons set forth above in Section XIV.A, we reject the alternative of adopting national rules governing state arbitration procedures. We believe the states are in a better position to develop mediation and arbitration rules that support the objectives of the 1996 Act. States may develop specific measures that best address the concerns of small entities and small incumbent LECs participating in mediation or arbitration.

1435. As set forth above in Section XIV.A, we reject the suggestion that the Commission return jurisdiction over an arbitration to the state commission. We further reject the argument that, once the Commission has mediated or arbitrated an agreement, the agreement must be submitted to the state commission for approval under state law. We decline to adopt the alternative suggested by some parties that, if the Commission steps into the state commission role, it is bound by state laws and standards that would have applied to the state commission. (Section XIV.A - 252(e)(5)).

1436. As explained above in Section XIV.A, we also reject the alternative that an arbitrated agreement not be binding on the parties. Finally, we reject the alternative of opening the arbitration process to all third parties, which should minimize the costs involved in such proceedings.

B. Requirements of Section 252(i)

1437. *Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements.* Our decisions in this section of the Order do not subject any small entities to reporting, recordkeeping or other compliance requirements. Incumbent LECs, including small incumbent LECs, are required to file with state commissions all interconnection agreements entered into with other carriers, including adjacent incumbent LECs. Incumbent LECs must also permit third parties to obtain any individual interconnection, service or network element arrangement on the same terms and conditions as those contained in any agreement approved under section 252. Moreover, incumbent LECs must prove with specificity that terms and

conditions contained in filed agreements are legitimately related to the purchase of the individual element or service being sought. Incumbent LECs must provide "most favored nation" status with regard to subsequent carriers regardless of whether they include "most favored nation" clauses in their agreements. Complying with these requirements may require small incumbent LECs and requesting small entities to use legal and negotiation skills.

1438. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.* Our decision to adopt national standards to implement section 252(i) should minimize the economic impact of our decision on both small entities and small incumbent LECs by expediting the resolution of disputes, thereby reducing transaction costs associated with interconnection. Our decision that section 252(i) permits requesting carriers to choose among individual provisions contained in publicly-filed interconnection agreements should minimize the economic impact for small new entrants by permitting them to obtain the provisions they desire without having to adopt entire agreements that would not reflect their costs or the specific technical characteristics of their networks. (Section XIV.B - Requirements of Section 252(i).) Moreover, small entities may be able to obtain the same terms and conditions of agreements reached by larger carriers that possess greater bargaining power without having to incur the costs of negotiation and/or arbitration.

1439. We also determine that publicly-filed agreements need only be made available to carriers who cause incumbent LECs to incur no greater costs than did the original carrier, which should minimize the economic impact on small incumbent LECs. We also minimize the regulatory burden for small entities and small incumbent LECs by finding that a new entrant seeking interconnection, network elements, or services pursuant to section 252(i) need not make such requests pursuant to the procedures for initial section 251 requests, but shall be permitted to obtain access to agreements on an expedited basis.

1440. As set forth above, we conclude that section 252(i) permits differential treatment of carriers based on differences in the costs of serving those carriers, but does not permit incumbent LECs to limit the availability of interconnection, services, or network elements only to those requesting carriers serving a comparable class of subscribers or providing the same service as the original party to the agreement. (Section XIV.B. - Requirements of Section 252(i).) These decisions should minimize the impact on small entities by preventing discrimination and enabling them to obtain the same terms and conditions as larger carriers that possess greater bargaining power. For the reasons set forth in Section XIV.B., we reject the interpretation favored by commenters arguing that new entrants should not be able to choose among provisions of interconnection agreements filed with state commissions.

E. Report to Congress

1441. The Commission shall send a copy of this FRFA, along with this Order, in a report to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996, 5

U.S.C. § 801(a)(1)(A). A copy of this FRFA will also be published in the Federal Register.

XVI. ORDERING CLAUSES

1442. Accordingly, IT IS ORDERED that, pursuant to Sections 1-4, 201-209, 214, 218, 224, 251, 252, and 303(r) of the Communications Act of 1934, as amended, and Section 601 of the Telecommunications Act of 1996, 47 U.S.C. §§ 151-154, 201-209, 214, 218, 224, 251, 252, 303(r), the REPORT AND ORDER IS ADOPTED, effective 30 days after publication of a summary in the Federal Register. The collections of information contained within are contingent upon approval by the Office of Management and Budget.

1443. IT IS FURTHER ORDERED that Part 51 of the Commission's rules, 47 C.F.R. § 51 is ADDED as set forth in Appendix B hereto.

1444. IT IS FURTHER ORDERED that, to the extent issues from CC Docket No. 95-185, *In the Matter of Interconnection Between Local Exchange Carriers and Commercial Mobile Service Providers*, are resolved here, we incorporate the relevant portions of the record in that docket.

1445. IT IS FURTHER ORDERED that, to the extent issues from CC Docket No. 91-346, *In the Matter of Intelligent Networks*, are resolved here, we incorporate the relevant portions of the record in that docket.

1446. IT IS FURTHER ORDERED, in light of the United States Court of Appeals for the District of Columbia Circuit in *Pacific Bell v. FCC*, 81 F.3d 1147 (D.C. Cir. 1996) (table) and the Telecommunications Act of 1996, that the rules and policies adopted in *Expanded Interconnection with Local Telephone Company Facilities*, CC Docket No. 91-141, 9 FCC Rcd 5154 (1994), shall remain in effect.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

List of Commenters in CC Docket No. 96-98

360o Communications Company (360 Communications)
Ad Hoc Coalition of Corporate Telecommunications Managers
Ad Hoc Telecommunications Users Committee
AirTouch Communications, Inc. (AirTouch)
Alabama Public Service Commission (Alabama Commission)
Alaska Telephone Association (Alaska Tel. Ass'n)
Alaska Public Utilities Commission (Alaska Commission)
Alliance for Public Technology
Allied Association Partners, LP & Geld Information Systems (Allied Ass'n)
ALLTEL Telephone Services Corporation (ALLTEL)
American Communications Services, Inc. (ACSI)
American Foundation for the Blind
American Mobile Telecommunications Association, Inc. (American Mobile Telecomm. Ass'n)
American Network Exchange, Inc. & U.S. Long Distance, Inc. (American Network Exchange)
American Personal Communications
American Petroleum Institute
American Public Communications Council
American Public Power Association (APPA)
America's Carriers Telecommunication Association (ACTA)
Ameritech
Anchorage Telephone Utility (Anchorage Tel. Utility)
Arch Communications Group, Inc. (Arch)
Arizona Corporation Commission (Arizona Commission)
Association for Study of Afro-American Life and History, Inc. (ASALH)
Association for Local Telecommunications Services (ALTS)
Association of Telemessaging Services International
AT&T Corp. (AT&T)
Attorneys General of Connecticut, Delaware, Illinois, Iowa, Massachusetts, Michigan, Minnesota, Missouri, New York, North Dakota, Pennsylvania, West Virginia and Wisconsin (Attorneys General)
Bay Springs Telephone Co., Crockett Telephone Co., National Telephone Company of Alabama, Peoples Telephone Company, Roanoke Telephone Co. & West Tennessee Telephone Company (Bay Springs, *et al.*)
Black Data Processing Associates
Black Data Processors Association (Black Data Processors Ass'n)
Bell Atlantic Telephone Companies (Bell Atlantic)
Bell Atlantic NYNEX Mobile, Inc. (Bell Atlantic NYNEX Mobile)
BellSouth Corporation, Bell Enterprises, Inc., Bellsouth Telecommunications, Inc. (BellSouth)
Bogue, Kansas
Buckeye Cablevision, Inc. (Buckeye Cablevision)

Cable & Wireless, Inc. (Cable & Wireless)
Cellular Telecommunications Industry Association (CTIA)
Celpage, Inc. (Celpage)
Centennial Cellular Corp.
Chrysler Minority Dealers Association (Chrysler Minority Dealers Ass'n)
Cincinnati Bell Telephone Company (Cincinnati Bell)
Citizens Utilities Company (Citizens Utilities)
Classic Telephone, Inc. (Classic Tel.)
Colorado Independent Telephone Association (Colorado Independent Tel. Ass'n)
Colorado Public Utilities Commission (Colorado Commission)
COMAV, Corp. (COMAV)
Comcast Cellular Communications, Inc. (Comcast Cellular)
Comcast Corporation (Comcast)
Communications and Energy Dispute Resolution Associates (CEDRA)
Competition Policy Institute
Competitive Telecommunications Association (CompTel)
Connecticut Department of Public Utility Control (Connecticut Commission)
Consumer Federation of America & Consumers Union (CFA/CU)
Consumer Project on Technology on Interconnection & Unbundling (Consumer Project)
Continental Cablevision, Inc. (Continental)
Cox Communications, Inc. (Cox)
Defense, Secretary of
DeSoto County, Mississippi Economic Development Council
District of Columbia Public Service Commission (District of Columbia Commission)
Economides, Nicholas (N. Economides)
Ericsson Corporation, The (Ericsson)
Excel Telecommunications, Inc. (Excel)
Florida Public Service Commission (Florida Commission)
Fred Williamson & Associates, Inc. (F. Williamson)
Frontier Corporation (Frontier)
General Communication, Inc. (GCI)
General ServicesAdministration/Department of Defense (GSA/DOD)
Georgia Public Service Commission (Georgia Commission)
Greater Washington Urban League
GST Telecom, Inc. (GST)
GTE Service Corporation (GTE)
Guam Telephone Authority
GVNW Inc./Management (GVNW)
Hart Engineers/Robert A. Hart, IV (Hart Engineers)
Hawaii Public Utilities Commission (Hawaii Commission)
Home Telephone Company, Inc. (Home Tel.)
Hyperion Telecommunications, Inc. (Hyperion)
Idaho Public Utilities Commission (Idaho Commission)
Illinois Commerce Commission (Illinois Commission)

Illinois Independent Telephone Association (Illinois Ind. Tel. Ass'n)
Independent Cable & Telecommunications Association (Ind. Cable & Telecomm. Ass'n)
Independent Data Communications Manufacturers Association (IDCMA)
Indiana Utility Regulatory Commission Staff (Indiana Commission Staff)
Information Technology Industry Council (ITIC)
Intelcom Group (U.S.A.), Inc. (Intelcom)
Intermedia Communications, Inc. (Intermedia)
International Communications Association (Intl. Comm. Ass'n)
Iowa Utilities Board (Iowa Commission)
John Staurulakis, Inc. (J. Staurulakis)
Joint Consumer Advocates
Jones Intercable, Inc. (Jones Intercable)
Justice, U. S. Department of (DoJ)
Kansas Corporation Commission (Kansas Commission)
Kentucky Public Service Commission (Kentucky Commission)
Koch, Richard N. (R. Koch)
LCI International Telecom Corp. (LCI)
LDDS Worldcom (LDDS)
Lincoln Telephone & Telegraph Company (Lincoln Tel.)
Louisiana Public Service Commission (Louisiana Commission)
Lucent Technologies, Inc. (Lucent)
Margaretville Telephone Co., Inc. (Margaretville Tel.)
Maryland Public Service Commission (Maryland Commission)
Massachusetts Assistive Technology Partnership Center World Institute on Disability,
Alliance for Technology Access, Trace Research and Development Center, CPB/WGBH
National Center For Accessible Media (Mass. Assistive Tech. Partnership, *et al.*)
Massachusetts, Commonwealth of Department of Public Utilities (Mass. Commission)
Massachusetts, Commonwealth of, Office of Attorney General (Mass. Attorney General)
Matanuska Telephone Association, Inc. (Matanuska Tel.)
MCI
Metricom, Inc. (Metricom)
MFS
Michigan Exchange Carriers Association (MECA)
Michigan, Illinois, and Texas Communities, *et al.*
Michigan Public Service Commission Staff (Michigan Commission Staff)
Minnesota Independent Coalition (Minnesota Independent Coalition)
Minnesota Public Utilities Commission (Minnesota Commission)
Missouri Public Service Commission (Missouri Commission)
Missouri Public Service Commissioner, Harold Crumpton (Missouri Commissioner)
Mobilemedia Communications, Inc. (Mobilemedia)
Motorola Satellite Communications, Inc. and U.S. Leo Services, Inc. (Motorola)
Municipal Utilities
National Association of the Deaf
National Association of Development Organizations, Gray Panthers, United Seniors Health

Cooperative, United Homeowners Association, National Hispanic Council on Aging, National Trust/Trustnet, National Association of Commissions for Women, National Council of Senior Citizens (NADO, *et al.*)
National Association of Regulatory Utility Commissioners (NARUC)
National Association of State Utility Consumer Advocates (National Ass'n of State Utility Advocates)
National Bar Association (National Bar Ass'n)
National Cable Television Association, Inc. (NCTA)
National Exchange Carrier Association, Inc. (NECA)
National League of Cities & National Association of Telecommunications Officers and Advisors (NLC/NATOA)
National Private Telecommunications Association
National Telecommunications & Information Administration (NTIA)
National Wireless Resellers Association (National Wireless Resellers Ass'n)
Nebraska Rural Development Commission
Network Reliability Council, Secretariat of Second (Network Reliability Council)
New Hampshire Public Utilities Commission, New Mexico State Corporation Commission, Utah Division of Public Utilities, Vermont Public Service Board, and Vermont Department of Public Service (New Hampshire Commission, *et al.*)
New Jersey Cable Telecommunications Association, South Carolina Cable Television Association & Texas Cable Telecommunications Association (New Jersey Cable Ass'n, *et al.*)
New Jersey, Staff of Board of Public Utilities (New Jersey Commission Staff)
New York State Consumer Protection Board (New York Consumer Protection Board)
New York State Department of Public Service (New York Commission)
Nextel Communications, Inc. (Nextel)
NEXTLINK Communications, L.L.C. (NEXTLINK)
North Carolina Utility Commission Public Staff (North Carolina Commission Staff)
North Dakota Public Service Commission (North Dakota Commission)
Northern Telecom, Inc. (Nortel)
NYNEX Telephone Companies (NYNEX)
Ohio Public Utilities Commission (Ohio Commission)
Office of the Ohio Consumers' Counsel (Ohio Consumers' Counsel)
Oklahoma Corporation Commission (Oklahoma Commission)
Omnipoint Corporation (Omnipoint)
Optel, Inc. (Optel)
Oregon Public Utility Commission (Oregon Commission)
Pacific Telesis Group (PacTel)
Paging Network, Inc. (PageNet)
Pennsylvania Public Utility Commission (Pennsylvania Commission)
People of the State of California and the Public Utility Commission of the State of California (California Commission)
Personal Communications Industry Association (PCIA)
ProNet Inc. (ProNet)

Puerto Rico Telephone Company (Puerto Rico Tel.)
Roseville Telephone Company (Roseville Tel.)
Rural Telephone Coalition (Rural Tel. Coalition)
SBC Communications Inc. (SBC)
Scherers Communications Group, Inc. (SCG)
Small Business Administration, U.S. (SBA)
Small Cable Business Association (SCBA)
SDN Users Association
South Carolina Public Service Commission (South Carolina Commission)
Southern New England Telephone Company (SNET)
Southwestern Bell Telephone Company (SWBT)
Sprint Corporation (Sprint)
Sprint Spectrum & American Personal Communications (Sprint/APC)
State of Maine Public Utilities Commission, State of Montana Public Service Commission, State of Nebraska Public Service Commission, State of New Hampshire Public Utilities Commission, State of New Mexico State Corporation Commission, State of Utah Public Service Commission and Division of Public Utilities, State of Vermont Department of Public Service and Public Service Board, and Public Utilities Commission of South Dakota (Maine Commission, *et al.*)
TCA, Inc. (TCA)
TDS Telecommunications Corporation (TDS)
Telecommunication Industries Analysis Project
Telecommunications Carriers for Competition (TCC)
Tele-Communications, Inc. (TCI)
Telecommunications Industry Association (TIA)
Telecommunications Ratepayers Association for Cost-Based and Equitable Rates (TRACER)
Telecommunications Resellers Association (Telecomm. Resellers Ass'n)
Telefonica Larga Distancia de Puerto Rico, Inc. (TLD)
Teleport Communications Group, Inc. (Teleport)
Texas Office of Public Utility Counsel (Texas Public Utility Counsel)
Texas, Public Utilities Commission (Texas Commission)
Texas Statewide Telephone Cooperative, Inc.
Texas Telephone Association (Texas Tel. Ass'n)
Time Warner Communications Holdings, Inc. (Time Warner)
Unicom, Inc. (Unicom)
United Calling Network, Inc. (United Calling Network)
United Cerebral Palsy Association
United States Telephone Association (USTA)
USTN Services, Inc. (USTN)
U.S. Network Corporation (U.S. Network)
U S West, Inc. (U S West)
Utah Division of Public Utilities
UTC

Utilex, Inc. (Utilex)
Vanguard Cellular Systems, Inc. (Vanguard)
Vartec Telecom, Inc., Transtel, Telephone Express, CGI, & CommuniGroup Inc. of Mississippi (Vartec, *et al.*)
Virginia State Corporation Commission Staff (Virginia Commission Staff)
Washington Independent Telephone Association (Wash. Ind. Tel. Ass'n)
Washington Utilities and Transportation Commission (Washington Commission)
Western Alliance
WinStar Communications, Inc. (WinStar)
Wisconsin, Public Service Commission (Wisconsin Commission)
Wyoming Public Service Commission (Wyoming Commission)

List Of Commenters in CC Docket No. 95-185

360 Degree Communications Co. (360 Degrees)
AirTouch Communications, Inc. (Airtouch)
Alaska 3 Cellular Corporation (Alaska CellularOne)
Alaska Telephone Association (ATA)
Alliance of Wireless Service Providers (Alliance)
Allied Personal Communications Industry Association of California (Allied)
ALLTEL Corporation (ALLTEL)
American Mobil Telecommunications Association (AMTA)
America's Carriers Telecommunications Association (ACTA)
American Personal Communications/Sprint Spectrum (APC/Sprint)
Ameritech
Anchorage Telephone Utility (ATU)
Arch Communications Group, Inc. (Arch)
AT&T Corporation (AT&T)
Bell Atlantic
Bell Atlantic Nynex Mobile (Bell Atlantic-NYNEX)
BellSouth Corporation (BellSouth)
State of California & the Public Utilities Commission (CPUC)
Cellular Communications of Puerto Rico, Inc. (CCPR)
Cellular Mobile Systems of St. Cloud G.P. (CMS)
Cellular Resellers Association (Cellular Resellers)
Cellular Telecommunications Industry Association (CTIA)
Celpage, Inc. (Celpage)
Centennial Cellular Corporation (Centennial)
Century Cellunet, Inc. (Century Cellunet)
Cincinnati Bell
CMT Partners (CMT)
Comcast Corporation (Comcast)
Competitive Telecommunications Association (CompTel)
Concord Telephone Company (Concord)
Connecticut Department of Public Utility (Connecticut)
Cox Enterprises, Inc. (Cox)
Florida Cellular RSA L.P. (Florida Cellular)
Frontier Corporation (Frontier)
GO Communications Corp. (GO)
General Services Administration (GSA)
GTE Services Corporation (GTE)
GVNW Inc., Management (GVNW)
Hart Engineers and 21st Century Telesis, Inc. (Hart Engineers)
Home Telephone Company, Inc. (HomeTel)
ICO Global Communications (ICO)
Illinois Commerce Commission (Illinois)

Illinois Independent Telephone Association (Illinois Ind. Tel. Assoc.)
Illinois Telephone Association (Illinois Telephone Assoc.)
John Staurulakis, Inc. (JSI)
LDDS WorldCom (LDDS WorldCom)
MCI Telecommunications Corp. (MCI)
MFS Communications Company, Inc. (MFS)
Mercury Cellular & Paging (Mercury)
Mountain Solutions
National Association of Regulatory Utility Commissioners (NARUC)
National Exchange Carrier Association (NECA)
National Telephone Cooperative Association (NTCA)
New Par
New York State Department of Public Service (New York)
Nextel Communications, Inc. (Nextel)
North Carolina 4 Cellular L.P. (North Carolina Cellular)
NYNEX Telephone Companies (NYNEX)
Public Utilities Commission of Ohio (Ohio)
Omnipoint Corporation (Omnipoint)
OPASTCO
Pacific Bell, Pacific Bell Mobile Services, Nevada Bell (Pacific Bell)
Paging Network, Inc. (PageNet)
Personal Communications Industry Association (PCIA)
Point Communications Company (Point)
Poka Lambro Telephone Cooperative (Poka Lambro)
Puerto Rico Telephone Company (PRTC)
Rural Cellular Association (RCA)
Rural Cellular Corporation (RCC)
SBC Communications, Inc. (SBC)
Smithville Telephone Company (Smithville)
Southeast Telephone Company (Southeast Telephone)
Sprint Corporation (Sprint)
Sprint Spectrum and American Personal Communications (Sprint/APC)
Telecommunications Resellers Association (TRA)
Teleport Communications Group (Teleport)
Time Warner Communications Holdings, Inc. (Time Warner)
Telecommunications Ratepayers Association for Cost-Based and Equitable Rates (TRACER)
Union Telephone Company (Union)
United States Telephone Association (USTA)
US West, Inc. (US West)
Vanguard Cellular Systems, Inc. (Vanguard)
Western Radio Services Co., Inc. (Western)
Western Wireless Corporation (Western Wireless)
Westlink Company (Westlink)

List of Commenters in CC Docket No. 91-346

Ad Hoc Telecommunications Users Committee (Ad Hoc)
Allnet Communication Services, Inc. (Allnet)
American Telephone and Telegraph Company (AT&T)
Ameritech Operating Companies (Ameritech)
Bell Atlantic Telephone Companies (Bell Atlantic)
BellSouth Corporation (BellSouth)
Cincinnati Bell Telephone (Cincinnati Bell)
Ericsson Corporation (Ericsson)
General Services Administration (GSA)
Geonet
GTE Service Corporation (GTE)
Information Technology Association of America (ITAA)
Joint Filers (includes Bell Atlantic, BellSouth, GTE, Lincoln, Pacific Bell, Rochester, SNET, and US WEST)
MCI Telecommunications Corporation (MCI)
National Communications System (NCS)
Nextel Communications, Inc. (Nextel)
North American Telecommunications Association (NATA)
Northern Telecom Inc. (Northern Telecom)
NYNEX Telephone Companies (NYNEX)
Pacific Bell and Nevada Bell (Pacific Bell)
Pacific Telesis Corporation (Pactel)
Services-oriented Open Network Technologies, Inc. (SONetech)
Siemens Stromberg-Carlson (Siemens)
Southern New England Telephone Company (SNET)
Southwestern Bell Corporation (SWBT)
Sprint
Telecommunications Industry Association (TIA)
Teleport Communications Group (Teleport)
Teloquent Communications Corporation (Teloquent)
United and Central Telephone Companies (United and Central)
United States Telephone Association (USTA)
US WEST Communications, Inc. (US WEST)

APPENDIX B - Final Rules

AMENDMENTS TO THE CODE OF FEDERAL REGULATIONS

1. Part 1 of Title 47 of the Code of Federal Regulations (C.F.R.) is amended as follows:

PART 1 -- PRACTICE AND PROCEDURE

2. The table of contents of part 1 is revised to read as follows:

* * * * *

Subpart J - Pole Attachment Complaint Procedures

1.1401	**Purpose.**
1.1402	**Definitions.**
1.1403	**Duty to provide access; modifications; notice of removal, increase or modification; petition for temporary stay.**
1.1404	**Complaint.**
1.1405	**File numbers.**
1.1406	**Dismissal of complaints.**
1.1407	**Response and reply.**
1.1408	**Number of copies and form of pleadings.**
1.1409	**Commission consideration of the complaint.**
1.1410	**Remedies.**
1.1411	**Meetings and hearings.**
1.1412	**Enforcement.**
1.1413	**Forfeiture.**
1.1414	**State certification.**
1.1415	**Other orders.**
1.1416	**Imputation of rates; modification costs.**

* * * * *

3. The authority citation for part 1 is revised to read as follows:

AUTHORITY: 47 U.S.C. 151, 154, 251, 252, 303, and 309(j) unless otherwise noted.

4. Section 1.1401 is revised to read as follows:

§ 1.1401 Purpose.

The rules and regulations contained in subpart J of this part provide complaint and enforcement procedures to ensure that telecommunications carriers and cable system operators have nondiscriminatory access to utility poles, ducts, conduits, and rights-of-way on rates, terms,

and conditions that are just and reasonable.

5. Section 1.1402 is amended by revising paragraph (d) to read as follows:

§ 1.1402 Definitions.

* * * * *

(d) The term *complaint* means a filing by a cable television system operator, a cable television system association, a utility, an association of utilities, a telecommunications carrier, or an association of telecommunications carriers alleging that it has been denied access to a utility pole, duct, conduit, or right-of-way in violation of this subpart and/or that a rate, term, or condition for a pole attachment is not just and reasonable.

* * * * *

6. Section 1.1403 is amended by retitling the section, by amending paragraphs (a) and (b) and redesignating them as paragraphs (c) and (d), respectively, and by adding new paragraphs (a) and (b) to read as follows:

§ 1.1403 Duty to provide access; modifications; notice of removal, increase or modification; petition for temporary stay.

(a) A utility shall provide a cable television system or any telecommunications carrier with nondiscriminatory access to any pole, duct, conduit, or right-of-way owned or controlled by it. Notwithstanding this obligation, a utility may deny a cable television system or any telecommunications carrier access to its poles, ducts, conduits, or rights-of-way, on a non-discriminatory basis where there is insufficient capacity or for reasons of safety, reliability and generally applicable engineering purposes.

(b) Requests for access to a utility's poles, ducts, conduits or rights-of-way by a telecommunications carrier or cable operator must be in writing. If access is not granted within 45 days of the request for access, the utility must confirm the denial in writing by the 45th day. The utility's denial of access shall be specific, shall include all relevant evidence and information supporting its denial, and shall explain how such evidence and information relate to a denial of access for reasons of lack of capacity, safety, reliability or engineering standards.

(c) A utility shall provide a cable television system operator or telecommunications carrier no less than 60 days written notice prior to: (1) removal of facilities or termination of any service to those facilities, such removal or termination arising out of a rate, term or condition of the cable television system operator's of telecommunications carrier's pole attachment agreement, or (2) any increase in pole attachment rates; or (3) any modification of facilities other than routine maintenance or modification in response to emergencies.

(d) A cable television system operator or telecommunications carrier may file a

"Petition for Temporary Stay" of the action contained in a notice received pursuant to paragraph (c) of this section within 15 days of receipt of such notice. Such submission shall not be considered unless it includes, in concise terms, the relief sought, the reasons for such relief, including a showing of irreparable harm and likely cessation of cable television service or telecommunication service, a copy of the notice, and certification of service as required by § 1.1404(b) of this subpart. The named respondent may file an answer within 7 days of the date the Petition for Temporary Stay was filed. No further filings under this section will be considered unless requested or authorized by the Commission and no extensions of time will be granted unless justified pursuant to § 1.46.

7. Section 1.1404 is amended by revising paragraphs (b) and (c) and by adding new paragraph (k) to read as follows:

§ 1.1404 Complaint.

* * * * *

(b) The complaint shall be accompanied by a certification of service on the named respondent, and each of the Federal, State, and local governmental agencies that regulate any aspect of the services provided by the complainant or respondent.

(c) In a case where it is claimed that a rate, term, or condition is unjust or unreasonable, the complaint shall contain a statement that the State has not certified to the Commission that it regulates the rates, terms and conditions for pole attachments. The complaint shall include a statement that the utility is not owned by any railroad, any person who is cooperatively organized or any person owned by the Federal Government or any State.

* * * * *

(k) In a case where a cable television system operator or telecommunications carrier claims that it has been denied access to a pole, duct, conduit or right-of-way despite a request made pursuant to section 47 U.S.C. § 224(f), the complaint shall be filed within 30 days of such denial. In addition to meeting the other requirements of this section, the complaint shall include the data and information necessary to support the claim, including:

(1) The reasons given for the denial of access to the utility's poles, ducts, conduits and rights-of-way;

(2) The basis for the complainant's claim that the denial of access is improper;

(3) The remedy sought by the complainant;

(4) A copy of the written request to the utility for access to its poles, ducts, conduits or rights-of-way;

(5) A copy of the utility's response to the written request including all information given by the utility to support its denial of access. A complaint alleging improper denial of access will not be dismissed if the complainant is unable to obtain a utility's written response, or if the utility denies the complainant any other information needed to establish a

prima facie case.

8. Section 1.1409 is amended by revising paragraphs (b) and (d) to read as follows:

§ 1.1409 Commission consideration of the complaint.

* * * * *

(b) The complainant shall have the burden of establishing a *prima facie* case that the rate, term, or condition is not just and reasonable or that the denial of access violates 47 U.S.C. § 224(f). If, however, a utility argues that the proposed rate is lower than its incremental costs, the utility has the burden of establishing that such rate is below the statutory minimum just and reasonable rate. In a case involving a denial of access, the utility shall have the burden of proving that the denial was lawful, once a *prima facie* case is established by the complainant.

* * * * *

(d) The Commission shall deny the complaint if it determines that the complainant has not established a *prima facie* case, or that the rate, term or condition is just and reasonable, or that the denial of access was lawful.

* * * * *

9. Section 1.1416 is amended by retitling the section and by amending paragraph (b) to read as follows:

§ 1.1416 Imputation of rates; modification costs.

* * * * *

(b) The costs of modifying a facility shall be borne by all parties that obtain access to the facility as a result of the modification and by all parties that directly benefit from the modification. Each party described in the preceding sentence shall share proportionately in the cost of the modification. A party with a preexisting attachment to the modified facility shall be deemed to directly benefit from a modification if, after receiving notification of such modification as provided in subpart J of this part, it adds to or modifies its attachment. Notwithstanding the foregoing, a party with a preexisting attachment to a pole, conduit, duct or right-of-way shall not be required to bear any of the costs of rearranging or replacing its attachment if such rearrangement or replacement is necessitated solely as a result of an additional attachment or the modification of an existing attachment sought by another party. If a party makes an attachment to the facility after the completion of the modification, such party shall share proportionately in the cost of the modification if such modification rendered possible the added attachment.

10. Part 20 of Title 47 of the Code of Federal Regulations (C.F.R.) is amended as follows:

PART 20 – COMMERCIAL MOBILE RADIO SERVICES

11. The authority citation for part 20 is revised to read as follows:

AUTHORITY: Secs. 4, 251-2, 303, and 332, 48 Stat. 1066, 1062, as amended; 47 U.S.C. 154, 251-4, 303, and 332 unless otherwise noted.

12. Section 20.11 is amended by adding paragraph (c) to read as follows:

§ 20.11 Interconnection to facilities of local exchange carriers.

* * * * *

(c) Local exchange carriers and commercial mobile radio service providers shall also comply with applicable provisions of part 51 of this chapter.

13. Part 51 of Title 47 of the Code of Federal Regulations (C.F.R.) is added to read as follows:

PART 51 – INTERCONNECTION

Subpart A - General information

Sec.

51.1 Basis and purpose.
51.3 Applicability to negotiated agreements.
51.5 Terms and definitions.

Subpart B - Telecommunications carriers

51.100 General duty.

Subpart C - Obligations of all local exchange carriers

51.201 Resale.
51.203 Number portability.
51.219 Access to rights of way.
51.221 Reciprocal compensation.
51.223 Application of additional requirements.

Subpart D - Additional obligations of incumbent local exchange carriers

51.301 Duty to negotiate.
51.303 Preexisting agreements.
51.305 Interconnection.

51.307 Duty to provide access on an unbundled basis to network elements.
51.309 Use of unbundled network elements.
51.311 Nondiscriminatory access to unbundled network elements.
51.313 Just, reasonable and nondiscriminatory terms and conditions for the provision of unbundled network elements.
51.315 Combination of unbundled network elements.
51.317 Standards for identifying network elements to be made available.
51.319 Specific unbundling requirements.
51.321 Methods of obtaining interconnection and access to unbundled elements under section 251 of the Act.
51.323 Standards for physical collocation and virtual collocation.

Subpart E - Exemptions, suspensions, and modifications of requirements of section251 of the Act.

51.401 State authority.
51.403 Carriers eligible for suspension or modification under section 251(f)(2) of the Act.
51.405 Burden of proof.

Subpart F - Pricing of interconnection and unbundled elements

51.501 Scope.
51.503 General pricing standard.
51.505 Forward-looking economic cost.
51.507 General rate structure standard.
51.509 Rate structure standards for specific elements.
51.511 Forward-looking economic cost per unit.
51.513 Proxies for forward-looking economic cost.
51.515 Application of access charges.

Subpart G - Resale

51.601 Scope of resale rules.
51.603 Resale obligation of all local exchange carriers.
51.605 Additional obligations of incumbent local exchange carriers.
51.607 Wholesale pricing standard.
51.609 Determination of avoided retail costs.
51.611 Interim wholesale rates.
51.613 Restrictions on resale.
51.615 Withdrawal of services.
51.617 Assessment of end user common line charge on resellers.

Subpart H - Reciprocal compensation for transport and termination of local telecommunications traffic

51.701 Scope of transport and termination pricing rules.
51.703 Reciprocal compensation obligation of LECs.
51.705 Incumbent LECs' rates for transport and termination.
51.707 Default proxies for incumbent LECs' transport and termination rates.
51.709 Rate structure for transport and termination.
51.711 Symmetrical reciprocal compensation.
51.713 Bill-and-keep arrangements for reciprocal compensation.
51.715 Interim transport and termination pricing.
51.717 Renegotiation of existing non-reciprocal arrangements.

Subpart I - Procedures for implementation of section 252 of the Act.

51.801 Commission action upon a state commission's failure to act to carry out its responsibility under section 252 of the Act.
51.803 Procedures for Commission notification of a state commission's failure to act.
51.805 The Commission's authority over proceedings and matters.
51.807 Arbitration and mediation of agreements by the Commission pursuant to section 252(e)(5) of the Act.
51.809 Availability of provisions of agreements to other telecommunications carriers under section 252(i) of the Act.

AUTHORITY: Sections 1-5, 7, 201-05, 218, 225-27, 251-54, 271, 48 Stat. 1070, as amended, 1077; 47 U.S.C. 151-55, 157, 201-05, 218, 225-27, 251-54, 271, unless otherwise noted.

Subpart A - General Information.

§ 51.1 Basis and purpose.

(a) *Basis*. These rules are issued pursuant to the Communications Act of 1934, as amended.

(b) *Purpose*. The purpose of these rules is to implement sections 251 and 252 of the Communications Act of 1934, as amended, 47 U.S.C. 251 and 252.

§ 51.3 Applicability to negotiated agreements.

To the extent provided in section 252(e)(2)(A) of the Act, a state commission shall have authority to approve an interconnection agreement adopted by negotiation even if the terms of the agreement do not comply with the requirements of this part.

§ 51.5 Terms and definitions.

Terms used in this part have the following meanings:

Act. The Communications Act of 1934, as amended.

Advanced intelligent network. "Advanced Intelligent Network" is a telecommunications network architecture in which call processing, call routing, and network management are provided by means of centralized databases located at points in an incumbent local exchange carrier's network.

Arbitration, final offer. "Final offer arbitration" is a procedure under which each party submits a final offer concerning the issues subject to arbitration, and the arbitrator selects, without modification, one of the final offers by the parties to the arbitration or portions of both such offers. "Entire package final offer arbitration," is a procedure under which the arbitrator must select, without modification, the entire proposal submitted by one of the parties to the arbitration. "Issue-by-issue final offer arbitration," is a procedure under which the arbitrator must select, without modification, on an issue-by-issue basis, one of the proposals submitted by the parties to the arbitration.

Billing. "Billing" involves the provision of appropriate usage data by one telecommunications carrier to another to facilitate customer billing with attendant acknowledgements and status reports. It also involves the exchange of information between telecommunications carriers to process claims and adjustments.

Commercial Mobile Radio Service (CMRS). "CMRS" has the same meaning as that term is defined in § 20.3 of this chapter.

Commission. "Commission" refers to the Federal Communications Commission.

Directory assistance service. "Directory assistance service" includes, but is not limited to, making available to customers, upon request, information contained in directory listings.

Directory listings. "Directory listings" are any information: (1) identifying the listed names of subscribers of a telecommunications carrier and such subscriber's telephone numbers, addresses, or primary advertising classifications (as such classifications are assigned at the time of the establishment of such service), or any combination of such listed names, numbers, addresses or classifications; and (2) that the telecommunications carrier or an affiliate has published, caused to be published, or accepted for publication in any directory format.

Downstream database. A "downstream database" is a database owned and operated by an individual carrier for the purpose of providing number portability in conjunction with other functions and services.

Equipment necessary for interconnection or access to unbundled network elements. For

purposes of section 251(c)(2) of the Act, the equipment used to interconnect with an incumbent local exchange carrier's network for the transmission and routing of telephone exchange service, exchange access service, or both. For the purposes of section 251(c)(3) of the Act, the equipment used to gain access to an incumbent local exchange carrier's unbundled network elements for the provision of a telecommunications service.

Incumbent Local Exchange Carrier (Incumbent LEC). With respect to an area, the local exchange carrier that: (1) on February 8, 1996, provided telephone exchange service in such area; and (2) (i) on February 8, 1996, was deemed to be a member of the exchange carrier association pursuant to § 69.601(b) of this chapter; or (ii) is a person or entity that, on or after February 8, 1996, became a successor or assign of a member described in clause (i) of this paragraph.

Interconnection. "Interconnection" is the linking of two networks for the mutual exchange of traffic. This term does not include the transport and termination of traffic.

Local Exchange Carrier (LEC). A "LEC" is any person that is engaged in the provision of telephone exchange service or exchange access. Such term does not include a person insofar as such person is engaged in the provision of a commercial mobile service under section 332(c) of the Act, except to the extent that the Commission finds that such service should be included in the definition of the such term.

Maintenance and repair. "Maintenance and repair" involves the exchange of information between telecommunications carriers where one initiates a request for maintenance or repair of existing products and services or unbundled network elements or combination thereof from the other with attendant acknowledgements and status reports.

Meet point. A "meet point" is a point of interconnection between two networks, designated by two telecommunications carriers, at which one carrier's responsibility for service begins and the other carrier's responsibility ends.

Meet point interconnection arrangement. A "meet point interconnection arrangement" is an arrangement by which each telecommunications carrier builds and maintains its network to a meet point.

Network element. A "network element" is a facility or equipment used in the provision of a telecommunications service. Such term also includes, but is not limited to, features, functions, and capabilities that are provided by means of such facility or equipment, including but not limited to, subscriber numbers, databases, signaling systems, and information sufficient for billing and collection or used in the transmission, routing, or other provision of a telecommunications service.

Operator services. "Operator services" are any automatic or live assistance to a consumer to arrange for billing or completion of a telephone call. Such services include, but are not limited to, busy line verification, emergency interrupt, and operator-assisted directory assistance services.

Physical collocation. "Physical collocation" is an offering by an incumbent LEC that enables a requesting telecommunications carrier to:

(1) place its own equipment to be used for interconnection or access to unbundled network elements within or upon an incumbent LEC's premises;

(2) use such equipment to interconnect with an incumbent LEC's network facilities for the transmission and routing of telephone exchange service, exchange access service, or both, or to gain access to an incumbent LEC's unbundled network elements for the provision of a telecommunications service;

(3) enter those premises, subject to reasonable terms and conditions, to install, maintain, and repair equipment necessary for interconnection or access to unbundled elements; and

(4) obtain reasonable amounts of space in an incumbent LEC's premises, as provided in this part, for the equipment necessary for interconnection or access to unbundled elements, allocated on a first-come, first-served basis.

Premises. "Premises" refers to an incumbent LEC's central offices and serving wire centers, as well as all buildings or similar structures owned or leased by an incumbent LEC that house its network facilities, and all structures that house incumbent LEC facilities on public rights-of-way, including but not limited to vaults containing loop concentrators or similar structures.

Pre-ordering and ordering. "Pre-ordering and ordering" includes the exchange of information between telecommunications carriers about current or proposed customer products and services or unbundled network elements or some combination thereof.

Provisioning. "Provisioning" involves the exchange of information between telecommunications carriers where one executes a request for a set of products and services or unbundled network elements or combination thereof from the other with attendant acknowledgements and status reports.

Rural telephone company. A "rural telephone company" is a LEC operating entity to the extent that such entity:

(1) provides common carrier service to any local exchange carrier study area that does not include either:

(i) any incorporated place of 10,000 inhabitants or more, or any part thereof, based on the most recently available population statistics of the Bureau of the Census; or

(ii) any territory, incorporated or unincorporated, included in an urbanized area, as defined by the Bureau of the Census as of August 10, 1993;

(2) provides telephone exchange service, including exchange access, to fewer than 50,000 access lines;

(3) provides telephone exchange service to any local exchange carrier study area with fewer than 100,000 access lines; or

(4) has less than 15 percent of its access lines in communities of more than 50,000

on February 8, 1996.

Service control point. A "service control point" is a computer database in the public switched network which contains information and call processing instructions needed to process and complete a telephone call.

Service creation environment. A "service creation environment" is a computer containing generic call processing software that can be programmed to create new advanced intelligent network call processing services.

Signal transfer point. A "signal transfer point" is a packet switch that acts as a routing hub for a signaling network and transfers messages between various points in and among signaling networks.

State commission. A "state commission" means the commission, board, or official (by whatever name designated) which under the laws of any State has regulatory jurisdiction with respect to intrastate operations of carriers. As referenced in this part, this term may include the Commission if it assumes the responsibility of the state commission, pursuant to section 252(e)(5) of the Act. This term shall also include any person or persons to whom the state commission has delegated its authority under section 251 and 252 of the Act.

State proceeding. A "state proceeding" is any administrative proceeding in which a state commission may approve or prescribe rates, terms, and conditions including, but not limited to, compulsory arbitration pursuant to section 252(b) of the Act, review of a Bell operating company statement of generally available terms pursuant section 252(f) of the Act, and a proceeding to determine whether to approve or reject an agreement adopted by arbitration pursuant to section 252(e) of the Act.

Technically feasible. Interconnection, access to unbundled network elements, collocation, and other methods of achieving interconnection or access to unbundled network elements at a point in the network shall be deemed technically feasible absent technical or operational concerns that prevent the fulfillment of a request by a telecommunications carrier for such interconnection, access, or methods. A determination of technical feasibility does not include consideration of economic, accounting, billing, space, or site concerns, except that space and site concerns may be considered in circumstances where there is no possibility of expanding the space available. The fact that an incumbent LEC must modify its facilities or equipment to respond to such request does not determine whether satisfying such request is technically feasible. An incumbent LEC that claims that it cannot satisfy such request because of adverse network reliability impacts must prove to the state commission by clear and convincing evidence that such interconnection, access, or methods would result in specific and significant adverse network reliability impacts.

Telecommunications carrier. A "telecommunications carrier" is any provider of telecommunications services, except that such term does not include aggregators of telecommunications services (as defined in section 226 of the Act). A telecommunications carrier shall be treated as a common carrier under the Act only to the extent that it is engaged in

providing telecommunications services, except that the Commission shall determine whether the provision of fixed and mobile satellite service shall be treated as common carriage. This definition includes CMRS providers, interexchange carriers (IXCs) and, to the extent they are acting as telecommunications carriers, companies that provide both telecommunications and information services. Private Mobile Radio Service providers are telecommunications carriers to the extent they provide domestic or international telecommunications for a fee directly to the public.

Virtual collocation. "Virtual collocation" is an offering by an incumbent LEC that enables a requesting telecommunications carrier to:

(1) designate or specify equipment to be used for interconnection or access to unbundled network elements to be located within or upon an incumbent LEC's premises, and dedicated to such telecommunications carrier's use;

(2) use such equipment to interconnect with an incumbent LEC's network facilities for the transmission and routing of telephone exchange service, exchange access service, or both, or for access to an incumbent LEC's unbundled network elements for the provision of a telecommunications service; and

(3) electronically monitor and control its communications channels terminating in such equipment.

Subpart B - Telecommunications Carriers.

§ 51.100 General duty.

(a) Each telecommunications carrier has the duty:

(1) to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers; and

(2) to not install network features, functions, or capabilities that do not comply with the guidelines and standards as provided in the Commission's rules or section 255 or 256 of the Act.

(b) A telecommunication carrier that has interconnected or gained access under sections 251(a)(1), 251(c)(2), or 251(c)(3) of the Act, may offer information services through the same arrangement, so long as it is offering telecommunications services through the same arrangement as well.

Subpart C - Obligations of All Local Exchange Carriers.

§ 51.201 Resale.

The rules governing resale of services by an incumbent LEC are set forth in subpart G of this part.

§ 51.203 Number portability.

The rules governing number portability are set forth in part 52, subpart C of this chapter.

§ 51.219 Access to rights of way.

The rules governing access to rights of way are set forth in part 1, subpart J of this chapter.

§ 51.221 Reciprocal compensation.

The rules governing reciprocal compensation are set forth in subpart H of this part.

§ 51.223 Application of additional requirements.

(a) A state may not impose the obligations set forth in section 251(c) of the Act on a LEC that is not classified as an incumbent LEC as defined in section 251(h)(1) of the Act, unless the Commission issues an order declaring that such LECs or classes or categories of LECs should be treated as incumbent LECs.

(b) A state commission, or any other interested party, may request that the Commission issue an order declaring that a particular LEC be treated as an incumbent LEC, or that a class or category of LECs be treated as incumbent LECs, pursuant to section 251(h)(2) of the Act.

Subpart D - Additional Obligations of Incumbent Local Exchange Carriers.

§ 51.301 Duty to negotiate.

(a) An incumbent LEC shall negotiate in good faith the terms and conditions of agreements to fulfill the duties established by sections 251(b) and (c) of the Act.

(b) A requesting telecommunications carrier shall negotiate in good faith the terms and conditions of agreements described in paragraph (a) of this section.

(c) If proven to the Commission, an appropriate state commission, or a court of competent jurisdiction, the following actions or practices, among others, violate the duty to negotiate in good faith:

(1) demanding that another party sign a nondisclosure agreement that precludes such party from providing information requested by the Commission, or a state commission, or in support of a request for arbitration under section 252(b)(2)(B) of the Act;

(3) refusing to include in an arbitrated or negotiated agreement a provision that permits the agreement to be amended in the future to take into account changes in Commission or state rules;

(4) conditioning negotiation on a requesting telecommunications carrier first obtaining state certifications;

(5) intentionally misleading or coercing another party into reaching an agreement that it would not otherwise have made;

(6) intentionally obstructing or delaying negotiations or resolutions of disputes;

(7) refusing throughout the negotiation process to designate a representative with authority to make binding representations, if such refusal significantly delays resolution of issues; and

(8) refusing to provide information necessary to reach agreement. Such refusal includes, but is not limited to:

(i) refusal by an incumbent LEC to furnish information about its network that a requesting telecommunications carrier reasonably requires to identify the network elements that it needs in order to serve a particular customer; and

(ii) refusal by a requesting telecommunications carrier to furnish cost data that would be relevant to setting rates if the parties were in arbitration.

§ 51.303 Preexisting agreements.

(a) All interconnection agreements between an incumbent LEC and a telecommunications carrier, including those negotiated before February 8, 1996, shall be submitted by the parties to the appropriate state commission for approval pursuant to section 252(e) of the Act.

(b) Interconnection agreements negotiated before February 8, 1996, between Class A carriers, as defined by § 32.11(a)(1) of this chapter, shall be filed by the parties with the appropriate state commission no later than June 30, 1997, or such earlier date as the state commission may require.

(c) If a state commission approves a preexisting agreement, it shall be made available to other parties in accordance with section 252(i) of the Act and § 51.809 of this part. A state commission may reject a preexisting agreement on the grounds that it is inconsistent with the public interest, or for other reasons set forth in section 252(e)(2)(A) of the Act.

§ 51.305 Interconnection.

(a) An incumbent LEC shall provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the incumbent LEC's network:

(1) for the transmission and routing of telephone exchange traffic, exchange access traffic, or both;

(2) at any technically feasible point within the incumbent LEC's network including, at a minimum:

(i) the line-side of a local switch;
(ii) the trunk-side of a local switch;
(iii) the trunk interconnection points for a tandem switch;
(iv) central office cross-connect points;
(v) out-of-band signaling transfer points necessary to exchange traffic at these points and access call-related databases; and
(vi) the points of access to unbundled network elements as described in § 51.319 of this part;

(3) that is at a level of quality that is equal to that which the incumbent LEC provides itself, a subsidiary, an affiliate, or any other party, except as provided in paragraph (4) of this section. At a minimum, this requires an incumbent LEC to design interconnection facilities to meet the same technical criteria and service standards that are used within the incumbent LEC's network. This obligation is not limited to a consideration of service quality as perceived by end users, and includes, but is not limited to, service quality as perceived by the requesting telecommunications carrier;

(4) that, if so requested by a telecommunications carrier and to the extent technically feasible, is superior in quality to that provided by the incumbent LEC to itself or to any subsidiary, affiliate, or any other party to which the incumbent LEC provides interconnection. Nothing in this section prohibits an incumbent LEC from providing interconnection that is lesser in quality at the sole request of the requesting telecommunications carrier; and

(5) on terms and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of any agreement, the requirements of sections 251 and 252 of the Act, and the Commission's rules including, but not limited to, offering such terms and conditions equally to all requesting telecommunications carriers, and offering such terms and conditions that are no less favorable than the terms and conditions upon which the incumbent LEC provides such interconnection to itself. This includes, but is not limited to, the time within which the incumbent LEC provides such interconnection.

(b) A carrier that requests interconnection solely for the purpose of originating or terminating its interexchange traffic on an incumbent LEC's network and not for the purpose of providing to others telephone exchange service, exchange access service, or both, is not entitled to receive interconnection pursuant to section 251(c)(2) of the Act.

(c) Previous successful interconnection at a particular point in a network, using particular facilities, constitutes substantial evidence that interconnection is technically feasible at that point, or at substantially similar points, in networks employing substantially similar

facilities. Adherence to the same interface or protocol standards shall constitute evidence of the substantial similarity of network facilities.

(d) Previous successful interconnection at a particular point in a network at a particular level of quality constitutes substantial evidence that interconnection is technically feasible at that point, or at substantially similar points, at that level of quality.

(e) An incumbent LEC that denies a request for interconnection at a particular point must prove to the state commission that interconnection at that point is not technically feasible.

(f) If technically feasible, an incumbent LEC shall provide two-way trunking upon request.

§ 51.307 Duty to provide access on an unbundled basis to network elements.

(a) An incumbent LEC shall provide, to a requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on terms and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of any agreement, the requirements of sections 251 and 252 of the Act, and the Commission's rules.

(b) The duty to provide access to unbundled network elements pursuant to section 251(c)(3) of the Act includes a duty to provide a connection to an unbundled network element independent of any duty to provide interconnection pursuant to this part and section 251(c)(2) of the Act.

(c) An incumbent LEC shall provide a requesting telecommunications carrier access to an unbundled network element, along with all of the unbundled network element's features, functions, and capabilities, in a manner that allows the requesting telecommunications carrier to provide any telecommunications service that can be offered by means of that network element.

(d) An incumbent LEC shall provide a requesting telecommunications carrier access to the facility or functionality of a requested network element separate from access to the facility or functionality of other network elements, for a separate charge.

§ 51.309 Use of unbundled network elements.

(a) An incumbent LEC shall not impose limitations, restrictions, or requirements on requests for, or the use of, unbundled network elements that would impair the ability of a requesting telecommunications carrier to offer a telecommunications service in the manner the requesting telecommunications carrier intends.

(b) A telecommunications carrier purchasing access to an unbundled network element may use such network element to provide exchange access services to itself in order to provide

interexchange services to subscribers.

(c) A telecommunications carrier purchasing access to an unbundled network facility is entitled to exclusive use of that facility for a period of time, or when purchasing access to a feature, function, or capability of a facility, a telecommunications carrier is entitled to use of that feature, function, or capability for a period of time. A telecommunications carrier's purchase of access to an unbundled network element does not relieve the incumbent LEC of the duty to maintain, repair, or replace the unbundled network element.

§ 51.311 Nondiscriminatory access to unbundled network elements.

(a) The quality of an unbundled network element, as well as the quality of the access to the unbundled network element, that an incumbent LEC provides to a requesting telecommunications carrier shall be the same for all telecommunications carriers requesting access to that network element, except as provided in paragraph (c) of this section.

(b) Except as provided in paragraph (c) of this section, to the extent technically feasible, the quality of an unbundled network element, as well as the quality of the access to such unbundled network element, that an incumbent LEC provides to a requesting telecommunications carrier shall be at least equal in quality to that which the incumbent LEC provides to itself. If an incumbent LEC fails to meet this requirement, the incumbent LEC must prove to the state commission that it is not technically feasible to provide the requested unbundled network element, or to provide access to the requested unbundled network element, at a level of quality that is equal to that which the incumbent LEC provides to itself.

(c) To the extent technically feasible, the quality of an unbundled network element, as well as the quality of the access to such unbundled network element, that an incumbent LEC provides to a requesting telecommunications carrier shall, upon request, be superior in quality to that which the incumbent LEC provides to itself. If an incumbent LEC fails to meet this requirement, the incumbent LEC must prove to the state commission that it is not technically feasible to provide the requested unbundled network element or access to such unbundled network element at the requested level of quality that is superior to that which the incumbent LEC provides to itself. Nothing in this section prohibits an incumbent LEC from providing interconnection that is lesser in quality at the sole request of the requesting telecommunications carrier.

(d) Previous successful access to an unbundled element at a particular point in a network, using particular facilities, is substantial evidence that access is technically feasible at that point, or at substantially similar points, in networks employing substantially similar facilities. Adherence to the same interface or protocol standards shall constitute evidence of the substantial similarity of network facilities.

(e) Previous successful provision of access to an unbundled element at a particular point in a network at a particular level of quality is substantial evidence that access is technically feasible at that point, or at substantially similar points, at that level of quality.

§ 51.313 Just, reasonable and nondiscriminatory terms and conditions for the provision of unbundled network elements.

(a) The terms and conditions pursuant to which an incumbent LEC provides access to unbundled network elements shall be offered equally to all requesting telecommunications carriers.

(b) Where applicable, the terms and conditions pursuant to which an incumbent LEC offers to provide access to unbundled network elements, including but not limited to, the time within which the incumbent LEC provisions such access to unbundled network elements, shall, at a minimum, be no less favorable to the requesting carrier than the terms and conditions under which the incumbent LEC provides such elements to itself.

(c) An incumbent LEC must provide a carrier purchasing access to unbundled network elements with the pre-ordering, ordering, provisioning, maintenance and repair, and billing functions of the incumbent LEC's operations support systems.

§ 51.315 Combination of unbundled network elements.

(a) An incumbent LEC shall provide unbundled network elements in a manner that allows requesting telecommunications carriers to combine such network elements in order to provide a telecommunications service.

(b) Except upon request, an incumbent LEC shall not separate requested network elements that the incumbent LEC currently combines.

(c) Upon request, an incumbent LEC shall perform the functions necessary to combine unbundled network elements in any manner, even if those elements are not ordinarily combined in the incumbent LEC's network, provided that such combination is:

(1) technically feasible; and

(2) would not impair the ability of other carriers to obtain access to unbundled network elements or to interconnect with the incumbent LEC's network.

(d) Upon request, an incumbent LEC shall perform the functions necessary to combine unbundled network elements with elements possessed by the requesting telecommunications carrier in any technically feasible manner.

(e) An incumbent LEC that denies a request to combine elements pursuant to paragraph (c)(1) or paragraph (d) of this section must prove to the state commission that the requested combination is not technically feasible.

(f) An incumbent LEC that denies a request to combine elements pursuant to paragraph (c)(2) of this section must prove to the state commission that the requested combination would impair the ability of other carriers to obtain access to unbundled network elements or to interconnect with the incumbent LEC's network.

§ 51.317 Standards for identifying network elements to be made available.

(a) In determining what network elements should be made available for purposes of section 251(c)(3) of the Act beyond those identified in § 51.319 of this part, a state commission shall first determine whether it is technically feasible for the incumbent LEC to provide access to a network element on an unbundled basis.

(b) If the state commission determines that it is technically feasible for the incumbent LEC to provide access to the network element on an unbundled basis, the state commission may decline to require unbundling of the network element only if:

(1) the state commission concludes that:

(i) the network element is proprietary, or contains proprietary information that will be revealed if the network element is provided on an unbundled basis; and

(ii) a requesting telecommunications carrier could offer the same proposed telecommunications service through the use of other, nonproprietary unbundled network elements within the incumbent LEC's network; or

(2) the state commission concludes that the failure of the incumbent LEC to provide access to the network element would not decrease the quality of, and would not increase the financial or administrative cost of, the telecommunications service a requesting telecommunications carrier seeks to offer, compared with providing that service over other unbundled network elements in the incumbent LEC's network.

§ 51.319 Specific unbundling requirements.

An incumbent LEC shall provide nondiscriminatory access in accordance with § 51.311 of this part and section 251(c)(3) of the Act to the following network elements on an unbundled basis to any requesting telecommunications carrier for the provision of a telecommunications service:

(a) *Local Loop*. The local loop network element is defined as a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and an end user customer premises;

(b) *Network Interface Device*.

(1) The network interface device network element is defined as a cross-connect device used to connect loop facilities to inside wiring.

(2) An incumbent LEC shall permit a requesting telecommunications carrier to connect its own local loops to the inside wiring of premises through the incumbent LEC's network interface device. The requesting telecommunications carrier shall establish this connection through an adjoining network interface device deployed by such telecommunications carrier;

(c) *Switching Capability*.

(1) Local Switching Capability.

(i) The local switching capability network element is defined as:

(A) line-side facilities, which include, but are not limited to, the connection between a loop termination at a main distribution frame and a switch line card;

(B) trunk-side facilities, which include, but are not limited to, the connection between trunk termination at a trunk-side cross-connect panel and a switch trunk card; and

(C) all features, functions, and capabilities of the switch, which include, but are not limited to:

(*1*) the basic switching function of connecting lines to lines, lines to trunks, trunks to lines, and trunks to trunks, as well as the same basic capabilities made available to the incumbent LEC's customers, such as a telephone number, white page listing, and dial tone; and

(*2*) all other features that the switch is capable of providing, including but not limited to custom calling, custom local area signaling service features, and Centrex, as well as any technically feasible customized routing functions provided by the switch.

(ii) An incumbent LEC shall transfer a customer's local service to a competing carrier within a time period no greater than the interval within which the incumbent LEC currently transfers end users between interexchange carriers, if such transfer requires only a change in the incumbent LEC's software;

(2) Tandem Switching Capability. The tandem switching capability network element is defined as:

(i) trunk-connect facilities, including but not limited to the connection between trunk termination at a cross-connect panel and a switch trunk card;

(ii) the basic switching function of connecting trunks to trunks; and

(iii) the functions that are centralized in tandem switches (as distinguished from separate end-office switches), including but not limited to call recording, the routing of calls to operator services, and signaling conversion features;

(d) *Interoffice Transmission Facilities*.

(1) Interoffice transmission facilities are defined as incumbent LEC transmission facilities dedicated to a particular customer or carrier, or shared by more than one customer or carrier, that provide telecommunications between wire centers owned by incumbent LECs or

requesting telecommunications carriers, or between switches owned by incumbent LECs or requesting telecommunications carriers.

(2) The incumbent LEC shall:

(i) provide a requesting telecommunications carrier exclusive use of interoffice transmission facilities dedicated to a particular customer or carrier, or use of the features, functions, and capabilities of interoffice transmission facilities shared by more than one customer or carrier;

(ii) provide all technically feasible transmission facilities, features, functions, and capabilities that the requesting telecommunications carrier could use to provide telecommunications services;

(iii) permit, to the extent technically feasible, a requesting telecommunications carrier to connect such interoffice facilities to equipment designated by the requesting telecommunications carrier, including, but not limited to, the requesting telecommunications carrier's collocated facilities; and

(iv) permit, to the extent technically feasible, a requesting telecommunications carrier to obtain the functionality provided by the incumbent LEC's digital cross-connect systems in the same manner that the incumbent LEC provides such functionality to interexchange carriers;

(e) *Signaling Networks and Call-Related Databases*.

(1) Signaling Networks.

(i) Signaling networks include, but are not limited to, signaling links and signaling transfer points.

(ii) When a requesting telecommunications carrier purchases unbundled switching capability from an incumbent LEC, the incumbent LEC shall provide access to its signaling network from that switch in the same manner in which it obtains such access itself.

(iii) An incumbent LEC shall provide a requesting telecommunications carrier with its own switching facilities access to the incumbent LEC's signaling network for each of the requesting telecommunications carrier's switches. This connection shall be made in the same manner as an incumbent LEC connects one of its own switches to a signal transfer point.

(iv) Under this paragraph, an incumbent LEC is not required to unbundle those signaling links that connect service control points to switching transfer points or to permit a requesting telecommunications carrier to link its own signal transfer points directly to the incumbent LEC's switch or call-related databases;

(2) Call-Related Databases.

(i) Call-related databases are defined as databases, other than operations support systems, that are used in signaling networks for billing and collection or the transmission, routing, or other provision of a telecommunications service.

(ii) For purposes of switch query and database response through a signaling network, an incumbent LEC shall provide access to its call-related databases, including, but not limited to, the Line Information Database, Toll Free Calling database, downstream number portability databases, and Advanced Intelligent Network databases, by means of physical access at the signaling transfer point linked to the unbundled database.

(iii) An incumbent LEC shall allow a requesting telecommunications carrier that has purchased an incumbent LEC's local switching capability to use the incumbent LEC's service control point element in the same manner, and via the same signaling links, as the incumbent LEC itself.

(iv) An incumbent LEC shall allow a requesting telecommunications carrier that has deployed its own switch, and has linked that switch to an incumbent LEC's signaling system, to gain access to the incumbent LEC's service control point in a manner that allows the requesting carrier to provide any call-related, database-supported services to customers served by the requesting telecommunications carrier's switch.

(v) A state commission shall consider whether mechanisms mediating access to an incumbent LEC's Advanced Intelligent Network service control points are necessary, and if so, whether they will adequately safeguard against intentional or unintentional misuse of the incumbent LEC's Advanced Intelligent Network facilities.

(vi) An incumbent LEC shall provide a requesting telecommunications carrier with access to call-related databases in a manner that complies with section 222 of the Act;

(3) Service Management Systems.

(A) A service management system is defined as a computer database or system not part of the public switched network that, among other things:

(*1*) interconnects to the service control point and sends to that service control point the information and call processing instructions needed for a network switch to process and complete a telephone call; and

(*2*) provides telecommunications carriers with the capability of entering and storing data regarding the processing and completing of a telephone call.

(B) An incumbent LEC shall provide a requesting telecommunications carrier with the information necessary to enter correctly, or format for entry, the information relevant for input into the particular incumbent LEC service management system.

(C) An incumbent LEC shall provide a requesting telecommunications carrier the same access to design, create, test, and deploy Advanced Intelligent Network-based services at the service management system, through a service creation environment, that the incumbent LEC provides to itself.

(D) A state commission shall consider whether mechanisms mediating access to Advanced Intelligent Network service management systems and service creation environments are necessary, and if so, whether they will adequately safeguard against intentional or unintentional misuse of the incumbent LEC's Advanced Intelligent Network facilities.

(E) An incumbent LEC shall provide a requesting telecommunications carrier access to service management systems in a manner that complies with section 222 of the Act;

(f) *Operations Support Systems Functions*.

(1) Operations support systems functions consist of pre-ordering, ordering, provisioning, maintenance and repair, and billing functions supported by an incumbent LEC's databases and information.

(2) An incumbent LEC that does not currently comply with this requirement shall do so as expeditiously as possible, but, in any event, no later than January 1, 1997; and

(g) *Operator Services and Directory Assistance*. An incumbent LEC shall provide access to operator service and directory assistance facilities where technically feasible.

§ 51.321 Methods of obtaining interconnection and access to unbundled elements under section 251 of the Act.

(a) Except as provided in paragraph (e) of this section, an incumbent LEC shall provide, on terms and conditions that are just, reasonable, and nondiscriminatory in accordance with the requirements of this part, any technically feasible method of obtaining interconnection or access to unbundled network elements at a particular point upon a request by a telecommunications carrier.

(b) Technically feasible methods of obtaining interconnection or access to unbundled network elements include, but are not limited to:

(1) physical collocation and virtual collocation at the premises of an incumbent LEC; and

(2) meet point interconnection arrangements.

(c) A previously successful method of obtaining interconnection or access to unbundled network elements at a particular premises or point on an incumbent LEC's network is substantial evidence that such method is technically feasible in the case of substantially similar network premises or points.

(d) An incumbent LEC that denies a request for a particular method of obtaining interconnection or access to unbundled network elements on the incumbent LEC's network must prove to the state commission that the requested method of obtaining interconnection or access to unbundled network elements at that point is not technically feasible.

(e) An incumbent LEC shall not be required to provide for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the incumbent LEC's premises if it demonstrates to the state commission that physical collocation is not practical for technical reasons or because of space limitations. In such cases, the incumbent LEC shall be required to provide virtual collocation, except at points where the incumbent LEC proves to the state commission that virtual collocation is not technically feasible. If virtual collocation is not technically feasible, the incumbent LEC shall provide other methods of interconnection and access to unbundled network elements to the extent technically feasible.

(f) An incumbent LEC shall submit to the state commission detailed floor plans or diagrams of any premises where the incumbent LEC claims that physical collocation is not practical because of space limitations.

(g) An incumbent LEC that is classified as a Class A company under § 32.11 of this chapter and that is not a National Exchange Carrier Association interstate tariff participant as provided in part 69, subpart G, shall continue to provide expanded interconnection service pursuant to interstate tariff in accordance with §§ 64.1401, 64.1402, 69.121 of this chapter, and the Commission's other requirements.

§ 51.323 Standards for physical collocation and virtual collocation.

(a) An incumbent LEC shall provide physical collocation and virtual collocation to requesting telecommunications carriers.

(b) An incumbent LEC shall permit the collocation of any type of equipment used for interconnection or access to unbundled network elements. Whenever an incumbent LEC objects to collocation of equipment by a requesting telecommunications carrier for purposes within the scope of section 251(c)(6) of the Act, the incumbent LEC shall prove to the state commission that the equipment will not be actually used by the telecommunications carrier for the purpose of obtaining interconnection or access to unbundled network elements. Equipment used for interconnection and access to unbundled network elements includes, but is not limited to:

(1) transmission equipment including, but not limited to, optical terminating equipment and multiplexers; and

(2) equipment being collocated to terminate basic transmission facilities pursuant to §§ 64.1401 and 64.1402 of this chapter as of August 1, 1996.

(c) Nothing in this section requires an incumbent LEC to permit collocation of switching equipment or equipment used to provide enhanced services.

(d) When an incumbent LEC provides physical collocation, virtual collocation, or both,

the incumbent LEC shall:

(1) provide an interconnection point or points, physically accessible by both the incumbent LEC and the collocating telecommunications carrier, at which the fiber optic cable carrying an interconnector's circuits can enter the incumbent LEC's premises, provided that the incumbent LEC shall designate interconnection points as close as reasonably possible to its premises;

(2) provide at least two such interconnection points at each incumbent LEC premises at which there are at least two entry points for the incumbent LEC's cable facilities, and at which space is available for new facilities in at least two of those entry points;

(3) permit interconnection of copper or coaxial cable if such interconnection is first approved by the state commission; and

(4) permit physical collocation of microwave transmission facilities except where such collocation is not practical for technical reasons or because of space limitations, in which case virtual collocation of such facilities is required where technically feasible.

(e) When providing virtual collocation, an incumbent LEC shall, at a minimum, install, maintain, and repair collocated equipment identified in paragraph (b) of this section within the same time periods and with failure rates that are no greater than those that apply to the performance of similar functions for comparable equipment of the incumbent LEC itself.

(f) An incumbent LEC shall allocate space for the collocation of the equipment identified in paragraph (b) of this section in accordance with the following requirements:

(1) an incumbent LEC shall make space available within or on its premises to requesting telecommunications carriers on a first-come, first-served basis, provided, however, that the incumbent LEC shall not be required to lease or construct additional space to provide for physical collocation when existing space has been exhausted;

(2) to the extent possible, an incumbent LEC shall make contiguous space available to requesting telecommunications carriers that seek to expand their existing collocation space;

(3) when planning renovations of existing facilities or constructing or leasing new facilities, an incumbent LEC shall take into account projected demand for collocation of equipment;

(4) an incumbent LEC may retain a limited amount of floor space for its own specific future uses, provided, however, that the incumbent LEC may not reserve space for future use on terms more favorable than those that apply to other telecommunications carriers seeking to reserve collocation space for their own future use;

(5) an incumbent LEC shall relinquish any space held for future use before denying a request for virtual collocation on the grounds of space limitations, unless the incumbent LEC proves to the state commission that virtual collocation at that point is not technically feasible; and

(6) an incumbent LEC may impose reasonable restrictions on the warehousing of unused space by collocating telecommunications carriers, provided, however, that the incumbent LEC shall not set maximum space limitations applicable to such carriers unless the incumbent LEC proves to the state commission that space constraints make such restrictions necessary.

(g) An incumbent LEC shall permit collocating telecommunications carriers to collocate equipment and connect such equipment to unbundled network transmission elements obtained from the incumbent LEC, and shall not require such telecommunications carriers to bring their own transmission facilities to the incumbent LEC's premises in which they seek to collocate equipment.

(h) An incumbent LEC shall permit a collocating telecommunications carrier to interconnect its network with that of another collocating telecommunications carrier at the incumbent LEC's premises and to connect its collocated equipment to the collocated equipment of another telecommunications carrier within the same premises provided that the collocated equipment is also used for interconnection with the incumbent LEC or for access to the incumbent LEC's unbundled network elements.

(1) An incumbent LEC shall provide the connection between the equipment in the collocated spaces of two or more telecommunications carriers, unless the incumbent LEC permits one or more of the collocating parties to provide this connection for themselves; and

(2) An incumbent LEC is not required to permit collocating telecommunications carriers to place their own connecting transmission facilities within the incumbent LEC's premises outside of the actual physical collocation space.

(i) An incumbent LEC may require reasonable security arrangements to separate a collocating telecommunications carrier's space from the incumbent LEC's facilities.

(j) An incumbent LEC shall permit a collocating telecommunications carrier to subcontract the construction of physical collocation arrangements with contractors approved by the incumbent LEC, provided, however, that the incumbent LEC shall not unreasonably withhold approval of contractors. Approval by an incumbent LEC shall be based on the same criteria it uses in approving contractors for its own purposes.

Subpart E - Exemptions, Suspensions, and Modifications of Requirements of Section 251 of the Act.

§ 51.401 State authority.

A state commission shall determine whether a telephone company is entitled, pursuant to section 251(f) of the Act, to exemption from, or suspension or modification of, the requirements of section 251 of the Act. Such determinations shall be made on a case-by-case basis.

§ 51.403 Carriers eligible for suspension or modification under section 251(f)(2) of the Act.

A LEC is not eligible for a suspension or modification of the requirements of section 251(b) or section 251(c) of the Act pursuant to section 251(f)(2) of the Act if such LEC, at the holding company level, has two percent or more of the subscriber lines installed in the aggregate nationwide.

§ 51.405 Burden of proof.

(a) Upon receipt of a bona fide request for interconnection, services, or access to unbundled network elements, a rural telephone company must prove to the state commission that the rural telephone company should be entitled, pursuant to section 251(f)(1) of the Act, to continued exemption from the requirements of section 251(c) of the Act.

(b) A LEC with fewer than two percent of the nation's subscriber lines installed in the aggregate nationwide must prove to the state commission, pursuant to section 251(f)(2) of the Act, that it is entitled to a suspension or modification of the application of a requirement or requirements of section 251(b) or 251(c) of the Act.

(c) In order to justify continued exemption under section 251(f)(1) of the Act once a bona fide request has been made, an incumbent LEC must offer evidence that the application of the requirements of section 251(c) of the Act would be likely to cause undue economic burden beyond the economic burden that is typically associated with efficient competitive entry.

(d) In order to justify a suspension or modification under section 251(f)(2) of the Act, a LEC must offer evidence that the application of section 251(b) or section 251(c) of the Act would be likely to cause undue economic burden beyond the economic burden that is typically associated with efficient competitive entry.

Subpart F - Pricing of Elements.

§ 51.501 Scope.

(a) The rules in this subpart apply to the pricing of network elements, interconnection, and methods of obtaining access to unbundled elements, including physical collocation and virtual collocation.

(b) As used in this subpart, the term "element" includes network elements, interconnection, and methods of obtaining interconnection and access to unbundled elements.

§ 51.503 General pricing standard.

(a) An incumbent LEC shall offer elements to requesting telecommunications carriers at rates, terms, and conditions that are just, reasonable, and nondiscriminatory.

(b) An incumbent LEC's rates for each element it offers shall comply with the rate structure rules set forth in §§ 51.507 and 51.509 of this part, and shall be established, at the election of the state commission--

(1) pursuant to the forward-looking economic cost-based pricing methodology set forth in §§ 51.505 and 51.511 of this part; or

(2) consistent with the proxy ceilings and ranges set forth in § 51.513 of this

part.

(c) The rates that an incumbent LEC assesses for elements shall not vary on the basis of the class of customers served by the requesting carrier, or on the type of services that the requesting carrier purchasing such elements uses them to provide.

§ 51.505 Forward-looking economic cost.

(a) *In general*. The forward-looking economic cost of an element equals the sum of:

(1) the total element long-run incremental cost of the element, as described in paragraph (b); and

(2) a reasonable allocation of forward-looking common costs, as described in paragraph (c).

(b) *Total element long-run incremental cost*. The total element long-run incremental cost of an element is the forward-looking cost over the long run of the total quantity of the facilities and functions that are directly attributable to, or reasonably identifiable as incremental to, such element, calculated taking as a given the incumbent LEC's provision of other elements.

(1) *Efficient network configuration*. The total element long-run incremental cost of an element should be measured based on the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of the incumbent LEC's wire centers.

(2) *Forward-looking cost of capital*. The forward-looking cost of capital shall be used in calculating the total element long-run incremental cost of an element.

(3) *Depreciation rates*. The depreciation rates used in calculating forward-looking economic costs of elements shall be economic depreciation rates.

(c) *Reasonable allocation of forward-looking common costs*.

(1) *Forward-looking common costs*. Forward-looking common costs are economic costs efficiently incurred in providing a group of elements or services (which may include all elements or services provided by the incumbent LEC) that cannot be attributed directly to individual elements or services.

(2) *Reasonable allocation*.

(A) The sum of a reasonable allocation of forward-looking common costs and the total element long-run incremental cost of an element shall not exceed the stand-alone costs associated with the element. In this context, stand-alone costs are the total forward-looking costs, including corporate costs, that would be incurred to produce a given element if that element were provided by an efficient firm that produced nothing but the given element.

(B) The sum of the allocation of forward-looking common costs for all elements and services shall equal the total forward-looking common costs, exclusive of retail costs, attributable to operating the incumbent LEC's total network, so as to provide all the elements and services offered.

(d) *Factors that may not be considered*. The following factors shall not be considered in a calculation of the forward-looking economic cost of an element:

(1) *Embedded costs*. Embedded costs are the costs that the incumbent LEC incurred in the past and that are recorded in the incumbent LEC's books of accounts.

(2) *Retail costs*. Retail costs include the costs of marketing, billing, collection, and other costs associated with offering retail telecommunications services to subscribers who are not telecommunications carriers, described in § 51.609 of this part.

(3) *Opportunity costs*. Opportunity costs include the revenues that the incumbent LEC would have received for the sale of telecommunications services, in the absence of competition from telecommunications carrier that purchase elements.

(4) *Revenues to subsidize other services*. Revenues to subsidize other services include revenues associated with elements or telecommunications service offerings other than the element for which a rate is being established.

(e) *Cost study requirements*. An incumbent LEC must prove to the state commission that the rates for each element it offers do not exceed the forward-looking economic cost per unit of providing the element, using a cost study that complies with the methodology set forth in this section and § 51.511 of this part.

(1) A state commission may set a rate outside the proxy ranges or above the proxy ceilings described in § 51.513 of this part only if that commission has given full and fair effect to the economic cost based pricing methodology described in this section and § 51.511 of this part in a state proceeding that meets the requirements of paragraph (e)(2) of this section.

(2) Any state proceeding conducted pursuant to this section shall provide notice and an opportunity for comment to affected parties and shall result in the creation of a written factual record that is sufficient for purposes of review. The record of any state proceeding in which a state commission considers a cost study for purposes of establishing rates under this section shall include any such cost study.

§ 51.507 General rate structure standard.

(a) Element rates shall be structured consistently with the manner in which the costs of providing the elements are incurred.

(b) The costs of dedicated facilities shall be recovered through flat-rated charges.

(c) The costs of shared facilities shall be recovered in a manner that efficiently apportions costs among users. Costs of shared facilities may be apportioned either through usage-sensitive charges or capacity-based flat-rated charges, if the state commission finds that such rates reasonably reflect the costs imposed by the various users.

(d) Recurring costs shall be recovered through recurring charges, unless an incumbent LEC proves to a state commission that such recurring costs are de minimis. Recurring costs shall be considered de minimis when the costs of administering the recurring charge would be excessive in relation to the amount of the recurring costs.

(e) State commissions may, where reasonable, require incumbent LECs to recover nonrecurring costs through recurring charges over a reasonable period of time. Nonrecurring

charges shall be allocated efficiently among requesting telecommunications carriers, and shall not permit an incumbent LEC to recover more than the total forward-looking economic cost of providing the applicable element.

(f) State commissions shall establish different rates for elements in at least three defined geographic areas within the state to reflect geographic cost differences.

(1) To establish geographically-deaveraged rates, state commissions may use existing density-related zone pricing plans described in § 69.123 of this chapter, or other such cost-related zone plans established pursuant to state law.

(2) In states not using such existing plans, state commissions must create a minimum of three cost-related rate zones.

§ 51.509 Rate structure standards for specific elements.

In addition to the general rules set forth in § 51.507 of this part, rates for specific elements shall comply with the following rate structure rules.

(a) *Local loops*. Loop costs shall be recovered through flat-rated charges.

(b) *Local switching*. Local switching costs shall be recovered through a combination of a flat-rated charge for line ports and one or more flat-rated or per-minute usage charges for the switching matrix and for trunk ports.

(c) *Dedicated transmission links*. Dedicated transmission link costs shall be recovered through flat-rated charges.

(d) *Shared transmission facilities between tandem switches and end offices*. The costs of shared transmission facilities between tandem switches and end offices may be recovered through usage-sensitive charges, or in another manner consistent with the manner that the incumbent LEC incurs those costs.

(e) *Tandem switching*. Tandem switching costs may be recovered through usage-sensitive charges, or in another manner consistent with the manner that the incumbent LEC incurs those costs.

(f) *Signaling and call-related database services*. Signaling and call-related database service costs shall be usage-sensitive, based on either the number of queries or the number of messages, with the exception of the dedicated circuits known as signaling links, the cost of which shall be recovered through flat-rated charges.

(g) *Collocation*. Collocation costs shall be recovered consistent with the rate structure policies established in the *Expanded Interconnection* proceeding, CC Docket No. 91-141.

§ 51.511 Forward-looking economic cost per unit.

(a) The forward-looking economic cost per unit of an element equals the forward-looking economic cost of the element, as defined in § 51.505 of this part, divided by a reasonable projection of the sum of the total number of units of the element that the incumbent LEC is likely to provide to requesting telecommunications carriers and the total number of units of the element that the incumbent LEC is likely to use in offering its own services, during a reasonable measuring period.

(b) (1) With respect to elements that an incumbent LEC offers on a flat-rate basis, the number of units is defined as the discrete number of elements (*e.g.*, local loops or local switch ports) that the incumbent LEC uses or provides.

(2) With respect to elements that an incumbent LEC offers on a usage-sensitive basis, the number of units is defined as the unit of measurement of the usage (*e.g.*, minutes of use or call-related database queries) of the element.

§ 51.513 Proxies for forward-looking economic cost.

(a) A state commission may determine that the cost information available to it with respect to one or more elements does not support the adoption of a rate or rates that are consistent with the requirements set forth in §§ 51.505 and 51.511 of this part. In that event, the state commission may establish a rate for an element that is consistent with the proxies specified in this section, provided that:

(1) any rate established through use of such proxies shall be superseded once the state commission has completed review of a cost study that complies with the forward-looking economic cost based pricing methodology described in §§ 51.505 and 51.511 of this part, and has concluded that such study is a reasonable basis for establishing element rates; and

(2) the state commission sets forth in writing a reasonable basis for its selection of a particular rate for the element.

(b) The constraints on proxy-based rates described in this section apply on a geographically averaged basis. For purposes of determining whether geographically deaveraged rates for elements comply with the provisions of this section, a geographically averaged proxy-based rate shall be computed based on the weighted average of the actual, geographically deaveraged rates that apply in separate geographic areas in a state.

(c) *Proxies for specific elements*.

(1) *Local loops*. For each state listed below, the proxy-based monthly rate for unbundled local loops, on a statewide weighted average basis, shall be no greater than the figures listed in the table below. (The Commission has not established a default proxy ceiling for loop rates in Alaska).

TABLE A

State	Proxy Ceiling	State	Proxy Ceiling
Alabama	$17.25	Nebraska	$18.05
Arizona	$12.85	Nevada	$18.95
Arkansas	$21.18	New Hampshire	$16.00
California	$11.10	New Jersey	$12.47
Colorado	$14.97	New Mexico	$18.66
Connecticut	$13.23	New York	$11.75
Delaware	$13.24	North Carolina	$16.71
District of Columbia	$10.81	North Dakota	$25.36
Florida	$13.68	Ohio	$15.73
Georgia	$16.09	Oklahoma	$17.63
Hawaii	$15.27	Oregon	$15.44
Idaho	$20.16	Pennsylvania	$12.30
Illinois	$13.12	Puerto Rico	$12.47
Indiana	$13.29	Rhode Island	$11.48
Iowa	$15.94	South Carolina	$17.07
Kansas	$19.85	South Dakota	$25.33
Kentucky	$16.70	Tennessee	$17.41
Louisiana	$16.98	Texas	$15.49
Maine	$18.69	Utah	$15.12
Maryland	$13.36	Vermont	$20.13
Massachusetts	$9.83	Virginia	$14.13
Michigan	$15.27	Washington	$13.37
Minnesota	$14.81	West Virginia	$19.25
Mississippi	$21.97	Wisconsin	$15.94
Missouri	$18.32	Wyoming	$25.11
Montana	$25.18		

(2) *Local switching*. The blended proxy-based rate for unbundled local switching shall be no greater than 0.4 cents ($0.004) per minute, and no less than 0.2 cents ($0.002) per minute, except that, where a state commission has, before August 8, 1996, established a rate less than or equal to 0.5 cents ($0.005) per minute, that rate may be retained pending completion of a forward-looking economic cost study. The blended rate for unbundled local switching shall be calculated as the sum of the following:

(A) the applicable flat-rated charges for subelements associated with unbundled local switching, such as line ports, divided by the projected average minutes of use per flat-rated subelement; and

(B) the applicable usage-sensitive charges for subelements associated with unbundled local switching, such as switching and trunk ports. A weighted average of such charges shall be used in appropriate circumstances, such as when peak and off-peak charges are used.

(3) *Dedicated transmission links*. The proxy-based rates for dedicated transmission links shall be no greater than the incumbent LEC's tariffed interstate charges for comparable entrance facilities or direct-trunked transport offerings, as described in §§ 69.110 and 69.112 of this chapter.

(4) *Shared transmission facilities between tandem switches and end offices*. The proxy-based rates for shared transmission facilities between tandem switches and end offices shall be no greater than the weighted per-minute equivalent of DS1 and DS3 interoffice dedicated transmission link rates that reflects the relative number of DS1 and DS3 circuits used in the tandem to end office links (or a surrogate based on the proportion of copper and fiber facilities in the interoffice network), calculated using a loading factor of 9,000 minutes per month per voice-grade circuit, as described in § 69.112 of this chapter.

(5) *Tandem switching*. The proxy-based rate for tandem switching shall be no greater than 0.15 cents ($0.0015) per minute of use.

(6) *Collocation*. To the extent that the incumbent LEC offers a comparable form of collocation in its interstate expanded interconnection tariffs, as described in §§ 64.1401 and 69.121 of this chapter, the proxy-based rates for collocation shall be no greater than the effective rates for equivalent services in the interstate expanded interconnection tariff. To the extent that the incumbent LEC does not offer a comparable form of collocation in its interstate expanded interconnection tariffs, a state commission may, in its discretion, establish a proxy-based rate, provided that the state commission sets forth in writing a reasonable basis for concluding that its rate would approximate the result of a forward-looking economic cost study, as described in § 51.505 of this part.

(7) *Signaling, call-related database, and other elements*. To the extent that the incumbent LEC has established rates for offerings comparable to other elements in its interstate access tariffs, and has provided cost support for those rates pursuant to § 61.49(h) of this chapter, the proxy-based rates for those elements shall be no greater than the effective rates for equivalent services in the interstate access tariffs. In other cases, the proxy-based rate shall be no greater than a rate based on direct costs plus a reasonable allocation of overhead loadings, pursuant to § 61.49(h) of this chapter.

§ 51.515 Application of access charges.

(a) Neither the interstate access charges described in part 69 nor comparable intrastate access charges shall be assessed by an incumbent LEC on purchasers of elements that offer telephone exchange or exchange access services.

(b) Notwithstanding §§ 51.505, 51.511, and 51.513(d)(2) of this part and paragraph (a) of this section, an incumbent LEC may assess upon telecommunications carriers that purchase unbundled local switching elements, as described in § 51.319(c)(1) of this part, for interstate minutes of use traversing such unbundled local switching elements, the carrier common line charge described in § 69.105 of this chapter, and a charge equal to 75% of the interconnection

charge described in § 69.124 of this chapter, only until the earliest of the following, and not thereafter:

(1) June 30, 1997;

(2) the later of the effective date of a final Commission decision in CC Docket No. 96-45, *Federal-State Joint Board on Universal Service*, or the effective date of a final Commission decision in a proceeding to consider reform of the interstate access charges described in part 69; or

(3) with respect to a Bell operating company only, the date on which that company is authorized to offer in-region interLATA service in a state pursuant to section 271 of the Act. The end date for Bell operating companies that are authorized to offer interLATA service shall apply only to the recovery of access charges in those states in which the Bell operating company is authorized to offer such service.

(c) Notwithstanding §§ 51.505, 51.511, and 51.513(d)(2) of this part and paragraph (a) of this section, an incumbent LEC may assess upon telecommunications carriers that purchase unbundled local switching elements, as described in § 51.319(c)(1) of this part, for intrastate toll minutes of use traversing such unbundled local switching elements, intrastate access charges comparable to those listed in paragraph (b) and any explicit intrastate universal service mechanism based on access charges, only until the earliest of the following, and not thereafter:

(1) June 30, 1997;

(2) the effective date of a state commission decision that an incumbent LEC may not assess such charges; or

(3) with respect to a Bell operating company only, the date on which that company is authorized to offer in-region interLATA service in the state pursuant to section 271 of the Act. The end date for Bell operating companies that are authorized to offer interLATA service shall apply only to the recovery of access charges in those states in which the Bell operating company is authorized to offer such service.

Subpart G - Resale.

§ 51.601 Scope of resale rules.

The provisions of this subpart govern the terms and conditions under which LECs offer telecommunications services to requesting telecommunications carriers for resale.

§ 51.603 Resale obligation of all local exchange carriers.

(a) A LEC shall make its telecommunications services available for resale to requesting telecommunications carriers on terms and conditions that are reasonable and non-discriminatory.

(b) A LEC must provide services to requesting telecommunications carriers for resale that are equal in quality, subject to the same conditions, and provided within the same provisioning time intervals that the LEC provides these services to others, including end users.

§ 51.605 Additional obligations of incumbent local exchange carriers.

(a) An incumbent LEC shall offer to any requesting telecommunications carrier any telecommunications service that the incumbent LEC offers on a retail basis to subscribers that are not telecommunications carriers for resale at wholesale rates that are at the election of the state commission–

(1) consistent with the avoided cost methodology described in §§ 51.607 and 51.609 of this part; or

(2) interim wholesale rates, pursuant to § 51.611 of this part,

(b) Except as provided in § 51.613 of this part, an incumbent LEC shall not impose restrictions on the resale by a requesting carrier of telecommunications services offered by the incumbent LEC.

§ 51.607 Wholesale pricing standard.

(a) The wholesale rate that an incumbent LEC may charge for a telecommunications service provided for resale to other telecommunications carriers shall equal the incumbent LEC's existing retail rate for the telecommunications service, less avoided retail costs, as described in § 51.609 of this part.

(b) For purposes of this subpart, exchange access services, as defined in section 3 of the Act, shall not be considered to be telecommunications services that incumbent LECs must make available for resale at wholesale rates to requesting telecommunications carriers.

§ 51.609 Determination of avoided retail costs.

(a) Except as provided in § 51.611 of this part, the amount of avoided retail costs shall be determined on the basis of a cost study that complies with the requirements of this section.

(b) Avoided retail costs shall be those costs that reasonably can be avoided when an incumbent LEC provides a telecommunications service for resale at wholesale rates to a requesting carrier.

(c) For incumbent LECs that are designated as Class A companies under § 32.11 of this chapter, except as provided in paragraph (d), avoided retail costs shall:

(1) include, as direct costs, the costs recorded in USOA accounts 6611 (product management), 6612 (sales), 6613 (product advertising), 6621 (call completion services), 6622 (number services), and 6623 (customer services) (§§ 32.6611, 32.6612, 32.6613, 32.6621, 32.6622, and 32.6623);

(2) include, as indirect costs, a portion of the costs recorded in USOA accounts 6121-6124 (general support expenses), 6711, 6712, 6721-6728 (corporate operations expenses), and 5301 (telecommunications uncollectibles) (§§ 32.6121-32.6124, 32.6711, 32.6712, 32.6721-32.6728, and 32.5301); and

(3) not include plant-specific expenses and plant non-specific expenses, other than

general support expenses (§§ 32.6110-32.6116, 32.6210-32.6565).

(d) Costs included in accounts 6611-6613 and 6621-6623 described in paragraph (c) (§§ 32.6611-32.6613 and 32.6621-32.6623) may be included in wholesale rates only to the extent that the incumbent LEC proves to a state commission that specific costs in these accounts will be incurred and are not avoidable with respect to services sold at wholesale, or that specific costs in these accounts are not included in the retail prices of resold services. Costs included in accounts 6110-6116 and 6210-6565 described in paragraph (c) (§§ 32.6110-32.6116, 32.6210-32.6565) may be treated as avoided retail costs, and excluded from wholesale rates, only to the extent that a party proves to a state commission that specific costs in these accounts can reasonably be avoided when an incumbent LEC provides a telecommunications service for resale to a requesting carrier.

(e) For incumbent LECs that are designated as Class B companies under § 32.11 of this chapter and that record information in summary accounts instead of specific USOA accounts, the entire relevant summary accounts may be used in lieu of the specific USOA accounts listed in paragraphs (c) and (d).

§ 51.611 Interim wholesale rates.

(a) If a state commission cannot, based on the information available to it, establish a wholesale rate using the methodology prescribed in § 51.609 of this part, then the state commission may elect to establish an interim wholesale rate as described in paragraph (b) of this section.

(b) The state commission may establish interim wholesale rates that are at least 17 percent, and no more than 25 percent, below the incumbent LEC's existing retail rates, and shall articulate the basis for selecting a particular discount rate. The same discount percentage rate shall be used to establish interim wholesale rates for each telecommunications service.

(c) A state commission that establishes interim wholesale rates shall, within a reasonable period of time thereafter, establish wholesale rates on the basis of an avoided retail cost study that complies with § 51.609 of this part.

§ 51.613 Restrictions on resale.

(a) Notwithstanding § 51.605(b) of this part, the following types of restrictions on resale may be imposed:

(1) *Cross-class selling*. A state commission may permit an incumbent LEC to prohibit a requesting telecommunications carrier that purchases at wholesale rates for resale, telecommunications services that the incumbent LEC makes available only to residential customers or to a limited class of residential customers, from offering such services to classes of customers that are not eligible to subscribe to such services from the incumbent LEC.

(2) *Short term promotions*. An incumbent LEC shall apply the wholesale discount to the ordinary rate for a retail service rather than a special promotional rate only if:

(A) such promotions involve rates that will be in effect for no more than 90 days; and

(B) the incumbent LEC does not use such promotional offerings to evade the wholesale rate obligation, for example by making available a sequential series of 90-day promotional rates.

(b) With respect to any restrictions on resale not permitted under paragraph (a), an incumbent LEC may impose a restriction only if it proves to the state commission that the restriction is reasonable and nondiscriminatory.

(c) *Branding*. Where operator, call completion, or directory assistance service is part of the service or service package an incumbent LEC offers for resale, failure by an incumbent LEC to comply with reseller unbranding or rebranding requests shall constitute a restriction on resale.

(1) An incumbent LEC may impose such a restriction only if it proves to the state commission that the restriction is reasonable and nondiscriminatory, such as by proving to a state commission that the incumbent LEC lacks the capability to comply with unbranding or rebranding requests.

(2) For purposes of this subpart, unbranding or rebranding shall mean that operator, call completion, or directory assistance services are offered in such a manner that an incumbent LEC's brand name or other identifying information is not identified to subscribers, or that such services are offered in such a manner that identifies to subscribers the requesting carrier's brand name or other identifying information.

§ 51.615 Withdrawal of services.

When an incumbent LEC makes a telecommunications service available only to a limited group of customers that have purchased such a service in the past, the incumbent LEC must also make such a service available at wholesale rates to requesting carriers to offer on a resale basis to the same limited group of customers that have purchased such a service in the past.

§ 51.617 Assessment of end user common line charge on resellers.

(a) Notwithstanding the provision in § 69.104(a) of this chapter that the end user common line charge be assessed upon end users, an incumbent LEC shall assess this charge, and the charge for changing the designated primary interexchange carrier, upon requesting carriers that purchase telephone exchange service for resale. The specific end user common line charge to be assessed will depend upon the identity of the end user served by the requesting carrier.

(b) When an incumbent LEC provides telephone exchange service to a requesting carrier at wholesale rates for resale, the incumbent LEC shall continue to assess the interstate access

charges provided in part 69, other than the end user common line charge, upon interexchange carriers that use the incumbent LEC's facilities to provide interstate or international telecommunications services to the interexchange carriers' subscribers.

Subpart H - Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic.

§ 51.701 Scope of transport and termination pricing rules.

(a) The provisions of this subpart apply to reciprocal compensation for transport and termination of local telecommunications traffic between LECs and other telecommunications carriers.

(b) *Local telecommunications traffic*. For purposes of this subpart, local telecommunications traffic means:

(1) telecommunications traffic between a LEC and a telecommunications carrier other than a CMRS provider that originates and terminates within a local service area established by the state commission; or

(2) telecommunications traffic between a LEC and a CMRS provider that, at the beginning of the call, originates and terminates within the same Major Trading Area, as defined in § 24.202(a) of this chapter.

(c) *Transport*. For purposes of this subpart, transport is the transmission and any necessary tandem switching of local telecommunications traffic subject to section 251(b)(5) of the Act from the interconnection point between the two carriers to the terminating carrier's end office switch that directly serves the called party, or equivalent facility provided by a carrier other than an incumbent LEC.

(d) *Termination*. For purposes of this subpart, termination is the switching of local telecommunications traffic at the terminating carrier's end office switch, or equivalent facility, and delivery of such traffic to the called party's premises.

(e) *Reciprocal compensation*. For purposes of this subpart, a reciprocal compensation arrangement between two carriers is one in which each of the two carriers receives compensation from the other carrier for the transport and termination on each carrier's network facilities of local telecommunications traffic that originates on the network facilities of the other carrier.

§ 51.703 Reciprocal compensation obligation of LECs.

(a) Each LEC shall establish reciprocal compensation arrangements for transport and termination of local telecommunications traffic with any requesting telecommunications carrier.

(b) A LEC may not assess charges on any other telecommunications carrier for local telecommunications traffic that originates on the LEC's network.

§ 51.705 Incumbent LECs' rates for transport and termination.

(a) An incumbent LEC's rates for transport and termination of local telecommunications traffic shall be established, at the election of the state commission, on the basis of:

(1) the forward-looking economic costs of such offerings, using a cost study pursuant to §§ 51.505 and 51.511 of this part;

(2) default proxies, as provided in § 51.707 of this part; or

(3) a bill-and-keep arrangement, as provided in § 51.713 of this part.

(b) In cases where both carriers in a reciprocal compensation arrangement are incumbent LECs, state commissions shall establish the rates of the smaller carrier on the basis of the larger carrier's forward-looking costs, pursuant to § 51.711 of this part.

§ 51.707 Default proxies for incumbent LECs' transport and termination rates.

(a) A state commission may determine that the cost information available to it with respect to transport and termination of local telecommunications traffic does not support the adoption of a rate or rates for an incumbent LEC that are consistent with the requirements of §§ 51.505 and 51.511 of this part. In that event, the state commission may establish rates for transport and termination of local telecommunications traffic, or for specific components included therein, that are consistent with the proxies specified in this section, provided that:

(1) any rate established through use of such proxies is superseded once that state commission establishes rates for transport and termination pursuant to §§ 51.705(a)(1) or 51.705(a)(3) of this part; and

(2) the state commission sets forth in writing a reasonable basis for its selection of a particular proxy for transport and termination of local telecommunications traffic, or for specific components included within transport and termination.

(b) If a state commission establishes rates for transport and termination of local telecommunications traffic on the basis of default proxies, such rates must meet the following requirements:

(1) *Termination*. The incumbent LEC's rates for the termination of local telecommunications traffic shall be no greater than 0.4 cents ($0.004) per minute, and no less than 0.2 cents ($0.002) per minute, except that, if a state commission has, before August 8, 1996, established a rate less than or equal to 0.5 cents ($0.005) per minute for such calls, that rate may be retained pending completion of a forward-looking economic cost study.

(2) *Transport*. The incumbent LEC's rates for the transport of local telecommunications traffic, under this section, shall comply with the proxies described in § 51.513(d)(3), (4), and (5) of this part that apply to the analogous unbundled network elements used in transporting a call to the end office that serves the called party.

§ 51.709 Rate structure for transport and termination.

(a) In state proceedings, a state commission shall establish rates for the transport and termination of local telecommunications traffic that are structured consistently with the manner

that carriers incur those costs, and consistently with the principles in §§ 51.507 and 51.509 of this part.

(b) The rate of a carrier providing transmission facilities dedicated to the transmission of traffic between two carriers' networks shall recover only the costs of the proportion of that trunk capacity used by an interconnecting carrier to send traffic that will terminate on the providing carrier's network. Such proportions may be measured during peak periods.

§ 51.711 Symmetrical reciprocal compensation.

(a) Rates for transport and termination of local telecommunications traffic shall be symmetrical, except as provided in paragraphs (b) and (c).

(1) For purposes of this subpart, symmetrical rates are rates that a carrier other than an incumbent LEC assesses upon an incumbent LEC for transport and termination of local telecommunications traffic equal to those that the incumbent LEC assesses upon the other carrier for the same services.

(2) In cases where both parties are incumbent LECs, or neither party is an incumbent LEC, a state commission shall establish the symmetrical rates for transport and termination based on the larger carrier's forward-looking costs.

(3) Where the switch of a carrier other than an incumbent LEC serves a geographic area comparable to the area served by the incumbent LEC's tandem switch, the appropriate rate for the carrier other than an incumbent LEC is the incumbent LEC's tandem interconnection rate.

(b) A state commission may establish asymmetrical rates for transport and termination of local telecommunications traffic only if the carrier other than the incumbent LEC (or the smaller of two incumbent LECs) proves to the state commission on the basis of a cost study using the forward-looking economic cost based pricing methodology described in §§ 51.505 and 51.511 of this part, that the forward-looking costs for a network efficiently configured and operated by the carrier other than the incumbent LEC (or the smaller of two incumbent LECs), exceed the costs incurred by the incumbent LEC (or the larger incumbent LEC), and, consequently, that such that a higher rate is justified.

(c) Pending further proceedings before the Commission, a state commission shall establish the rates that licensees in the Paging and Radiotelephone Service (defined in part 22, subpart E of this chapter), Narrowband Personal Communications Services (defined in part 24, subpart D of this chapter), and Paging Operations in the Private Land Mobile Radio Services (defined in part 90, subpart P of this chapter) may assess upon other carriers for the transport and termination of local telecommunications traffic based on the forward-looking costs that such licensees incur in providing such services, pursuant to §§ 51.505 and 51.511 of this part. Such licensees' rates shall not be set based on the default proxies described in § 51.707 of this part.

§ 51.713 Bill-and-keep arrangements for reciprocal compensation.

(a) For purposes of this subpart, bill-and-keep arrangements are those in which neither

of the two interconnecting carriers charges the other for the termination of local telecommunications traffic that originates on the other carrier's network.

(b) A state commission may impose bill-and-keep arrangements if the state commission determines that the amount of local telecommunications traffic from one network to the other is roughly balanced with the amount of local telecommunications traffic flowing in the opposite direction, and is expected to remain so, and no showing has been made pursuant to § 51.711(b) of this part.

(c) Nothing in this section precludes a state commission from presuming that the amount of local telecommunications traffic from one network to the other is roughly balanced with the amount of local telecommunications traffic flowing in the opposite direction and is expected to remain so, unless a party rebuts such a presumption.

§ 51.715 Interim transport and termination pricing.

(a) Upon request from a telecommunications carrier without an existing interconnection arrangement with an incumbent LEC, the incumbent LEC shall provide transport and termination of local telecommunications traffic immediately under an interim arrangement, pending resolution of negotiation or arbitration regarding transport and termination rates and approval of such rates by a state commission under sections 251 and 252 of the Act.

(1) This requirement shall not apply when the requesting carrier has an existing interconnection arrangement that provides for the transport and termination of local telecommunications traffic by the incumbent LEC.

(2) A telecommunications carrier may take advantage of such an interim arrangement only after it has requested negotiation with the incumbent LEC pursuant to § 51.301 of this part.

(b) Upon receipt of a request as described in paragraph (a), an incumbent LEC must, without unreasonable delay, establish an interim arrangement for transport and termination of local telecommunications traffic at symmetrical rates.

(1) In a state in which the state commission has established transport and termination rates based on forward-looking economic cost studies, an incumbent LEC shall use these state-determined rates as interim transport and termination rates.

(2) In a state in which the state commission has established transport and termination rates consistent with the default price ranges and ceilings described in § 51.707 of this part, an incumbent LEC shall use these state-determined rates as interim rates.

(3) In a state in which the state commission has neither established transport and termination rates based on forward-looking economic cost studies nor established transport and termination rates consistent with the default price ranges described in § 51.707 of this part, an incumbent LEC shall set interim transport and termination rates at the default ceilings for end-office switching (0.4 cents per minute of use), tandem switching (0.15 cents per minute of use), and transport (as described in § 51.707(b)(2) of this part).

(c) An interim arrangement shall cease to be in effect when one of the following occurs

with respect to rates for transport and termination of local telecommunications traffic subject to the interim arrangement:

(1) a voluntary agreement has been negotiated and approved by a state commission;

(2) an agreement has been arbitrated and approved by a state commission; or

(3) the period for requesting arbitration has passed with no such request.

(d) If the rates for transport and termination of local telecommunications traffic in an interim arrangement differ from the rates established by a state commission pursuant to § 51.705 of this part, the state commission shall require carriers to make adjustments to past compensation. Such adjustments to past compensation shall allow each carrier to receive the level of compensation it would have received had the rates in the interim arrangement equalled the rates later established by the state commission pursuant to § 51.705 of this part.

§ 51.717 Renegotiation of existing non-reciprocal arrangements.

(a) Any CMRS provider that operates under an arrangement with an incumbent LEC that was established before August 8, 1996 and that provides for non-reciprocal compensation for transport and termination of local telecommunications traffic is entitled to renegotiate these arrangements with no termination liability or other contract penalties.

(b) From the date that a CMRS provider makes a request under paragraph (a) until a new agreement has been either arbitrated or negotiated and has been approved by a state commission, the CMRS provider shall be entitled to assess upon the incumbent LEC the same rates for the transport and termination of local telecommunications traffic that the incumbent LEC assesses upon the CMRS provider pursuant to the pre-existing arrangement.

Subpart I - Procedures for Implementation of Section 252 of the Act.

§ 51.801 Commission action upon a state commission's failure to act to carry out its responsibility under section 252 of the Act.

(a) If a state commission fails to act to carry out its responsibility under section 252 of the Act in any proceeding or other matter under section 252 of the Act, the Commission shall issue an order preempting the state commission's jurisdiction of that proceeding or matter within 90 days after being notified (or taking notice) of such failure, and shall assume the responsibility of the state commission under section 252 of the Act with respect to the proceeding or matter and shall act for the state commission.

(b) For purposes of this part, a state commission fails to act if the state commission fails to respond, within a reasonable time, to a request for mediation, as provided for in section 252(a)(2) of the Act, or for a request for arbitration, as provided for in section 252(b) of the Act, or fails to complete an arbitration within the time limits established in section 252(b)(4)(C) of the Act.

(c) A state shall not be deemed to have failed to act for purposes of section 252(e)(5) of the Act if an agreement is deemed approved under section 252(e)(4) of the Act.

§ 51.803 Procedures for Commission notification of a state commission's failure to act.

(a) Any party seeking preemption of a state commission's jurisdiction, based on the state commission's failure to act, shall notify the Commission in accordance with following procedures:

(1) such party shall file with the Secretary of the Commission a petition, supported by an affidavit, that states with specificity the basis for the petition and any information that supports the claim that the state has failed to act, including, but not limited to, the applicable provisions of the Act and the factual circumstances supporting a finding that the state commission has failed to act;

(2) such party shall ensure that the state commission and the other parties to the proceeding or matter for which preemption is sought are served with the petition required in paragraph (a)(1) of this section on the same date that the petitioning party serves the petition on the Commission; and

(3) within fifteen days from the date of service of the petition required in paragraph (a)(1) of this section, the applicable state commission and parties to the proceeding may file with the Commission a response to the petition.

(b) The party seeking preemption must prove that the state has failed to act to carry out its responsibilities under section 252 of the Act.

(c) The Commission, pursuant to section 252(e)(5) of the Act, may take notice upon its own motion that a state commission has failed to act. In such a case, the Commission shall issue a public notice that the Commission has taken notice of a state commission's failure to act. The applicable state commission and the parties to a proceeding or matter in which the Commission has taken notice of the state commission's failure to act may file, within fifteen days of the issuance of the public notice, comments on whether the Commission is required to assume the responsibility of the state commission under section 252 of the Act with respect to the proceeding or matter.

(d) The Commission shall issue an order determining whether it is required to preempt the state commission's jurisdiction of a proceeding or matter within 90 days after being notified under paragraph (a) of this section or taking notice under paragraph (c) of this section of a state commission's failure to carry out its responsibilities under section 252 of the Act.

§ 51.805 The Commission's authority over proceedings and matters.

(a) If the Commission assumes responsibility for a proceeding or matter pursuant to section 252(e)(5) of the Act, the Commission shall retain jurisdiction over such proceeding or matter. At a minimum, the Commission shall approve or reject any interconnection agreement adopted by negotiation, mediation or arbitration for which the Commission, pursuant to section

252(e)(5) of the Act, has assumed the state's commission's responsibilities.

(b) Agreements reached pursuant to mediation or arbitration by the Commission pursuant to section 252(e)(5) of the Act are not required to be submitted to the state commission for approval or rejection.

§ 51.807 Arbitration and mediation of agreements by the Commission pursuant to section 252(e)(5) of the Act.

(a) The rules established in this section shall apply only to instances in which the Commission assumes jurisdiction under section 252(e)(5) of the Act.

(b) When the Commission assumes responsibility for a proceeding or matter pursuant to section 252(e)(5) of the Act, it shall not be bound by state laws and standards that would have applied to the state commission in such proceeding or matter.

(c) In resolving, by arbitration under section 252(b) of the Act, any open issues and in imposing conditions upon the parties to the agreement, the Commission shall:

(1) ensure that such resolution and conditions meet the requirements of section 251 of the Act, including the rules prescribed by the Commission pursuant to that section;

(2) establish any rates for interconnection, services, or network elements according to section 252(d) of the Act, including the rules prescribed by the Commission pursuant to that section; and

(3) provide a schedule for implementation of the terms and conditions by the parties to the agreement.

(d) An arbitrator, acting pursuant to the Commission's authority under section 252(e)(5) of the Act, shall use final offer arbitration, except as otherwise provided in this section:

(1) at the discretion of the arbitrator, final offer arbitration may take the form of either entire package final offer arbitration or issue-by-issue final offer arbitration.

(2) negotiations among the parties may continue, with or without the assistance of the arbitrator, after final arbitration offers are submitted. Parties may submit subsequent final offers following such negotiations.

(3) to provide an opportunity for final post-offer negotiations, the arbitrator will not issue a decision for at least fifteen days after submission to the arbitrator of the final offers by the parties.

(e) Final offers submitted by the parties to the arbitrator shall be consistent with section 251 of the Act, including the rules prescribed by the Commission pursuant to that section.

(f) Each final offer shall:

(1) meet the requirements of section 251, including the rules prescribed by the Commission pursuant to that section;

(2) establish rates for interconnection, services, or access to unbundled network elements according to section 252(d) of the Act, including the rules prescribed by the

Commission pursuant to that section, and

(3) provide a schedule for implementation of the terms and conditions by the parties to the agreement. If a final offer submitted by one or more parties fails to comply with the requirements of this section, the arbitrator has discretion to take steps designed to result in an arbitrated agreement that satisfies the requirements of section 252(c) of the Act, including requiring parties to submit new final offers within a time frame specified by the arbitrator, or adopting a result not submitted by any party that is consistent with the requirements of section 252(c) of the Act, and the rules prescribed by the Commission pursuant to that section.

(g) Participation in the arbitration proceeding will be limited to the requesting telecommunications carrier and the incumbent LEC, except that the Commission will consider requests by third parties to file written pleadings.

(h) Absent mutual consent of the parties to change any terms and conditions adopted by the arbitrator, the decision of the arbitrator shall be binding on the parties.

§ 51.809 Availability of provisions of agreements to other telecommunications carriers under section 252(i) of the Act.

(a) An incumbent LEC shall make available without unreasonable delay to any requesting telecommunications carrier any individual interconnection, service, or network element arrangement contained in any agreement to which it is a party that is approved by a state commission pursuant to section 252 of the Act, upon the same rates, terms, and conditions as those provided in the agreement. An incumbent LEC may not limit the availability of any individual interconnection, service, or network element only to those requesting carriers serving a comparable class of subscribers or providing the same service (*i.e.*, local, access, or interexchange) as the original party to the agreement.

(b) The obligations of paragraph (a) of this section shall not apply where the incumbent LEC proves to the state commission that:

(1) the costs of providing a particular interconnection, service, or element to the requesting telecommunications carrier are greater than the costs of providing it to the telecommunications carrier that originally negotiated the agreement, or

(2) the provision of a particular interconnection, service, or element to the requesting carrier is not technically feasible.

(c) Individual interconnection, service, or network element arrangements shall remain available for use by telecommunications carriers pursuant to this section for a reasonable period of time after the approved agreement is available for public inspection under section 252(f) of the Act.

14. Part 90 of Title 47 of the Code of Federal Regulations (C.F.R.) is amended as follows:

PART 90 - PRIVATE LAND MOBILE RADIO SERVICES

15. The authority citation for Part 90 is revised to read as follows:

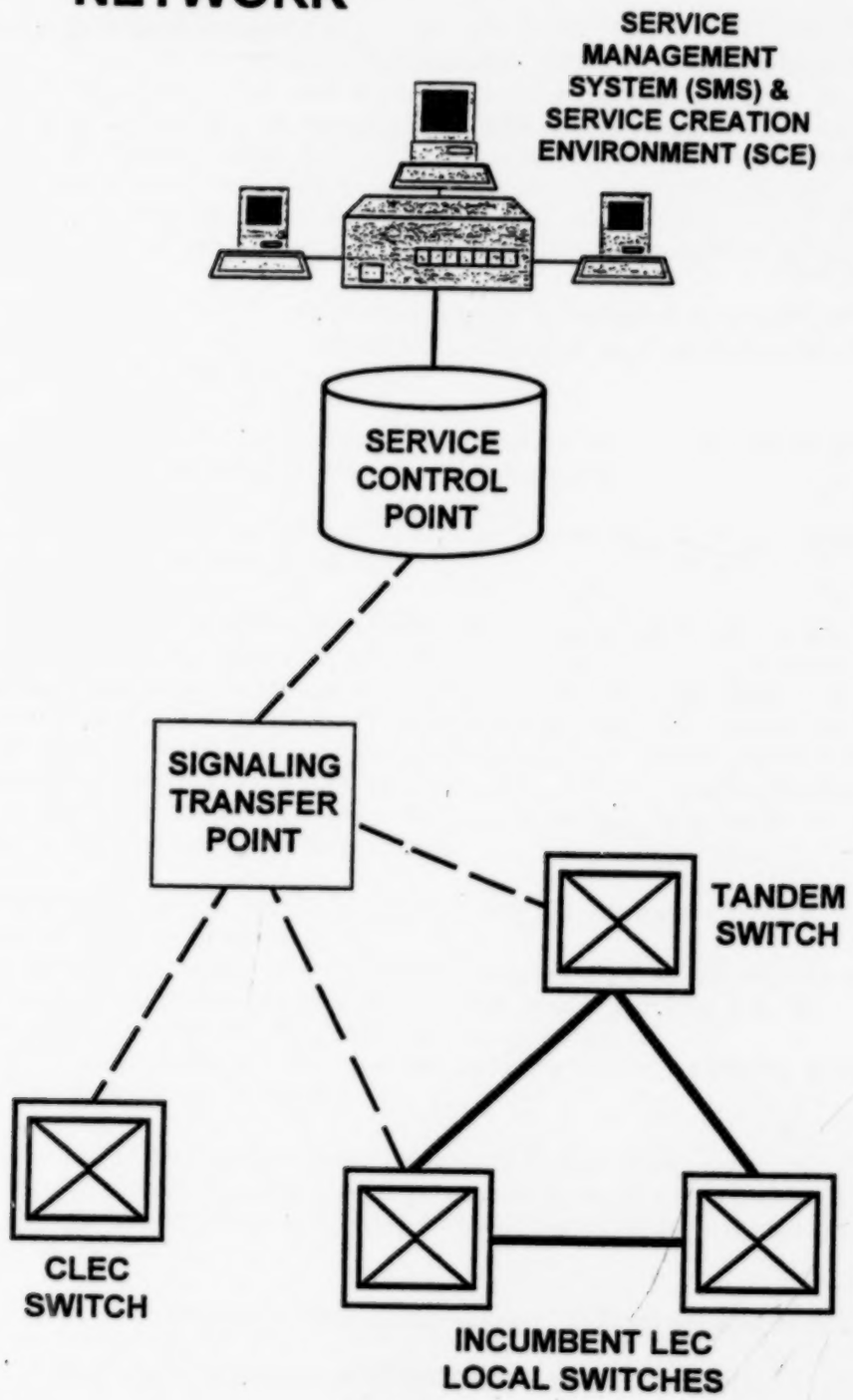
AUTHORITY: Secs. 4, 251-2, 303, 309, and 332, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 251-2, 303, 309 and 332, unless otherwise noted.

16. Section 90.5 is amended by adding paragraph (k) and renumbering the remaining paragraphs to read as follows:

*****

(k) Part 51 contains rules relating to interconnection.
(l) ***
(m) ***

ADVANCED INTELLIGENT NETWORK



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Appendix D
State Proxy Ceilings for the Local Loop

State	Proxy Ceiling	State	Proxy Ceiling
Alabama	$17.25	Montana	$25.18
Arizona	$12.85	Nebraska	$18.05
Arkansas	$21.18	Nevada	$18.95
California	$11.10	New Hampshire	$16.00
Colorado	$14.97	New Jersey	$12.47
Connecticut	$13.23	New Mexico	$18.66
Delaware	$13.24	New York	$11.75
District of Columbia	$10.81	North Carolina	$16.71
Florida	$13.68	North Dakota	$25.36
Georgia	$16.09	Ohio	$15.73
Hawaii	$15.27	Oklahoma	$17.63
Idaho	$20.16	Oregon	$15.44
Illinois	$13.12	Pennsylvania	$12.30
Indiana	$13.29	Puerto Rico	$12.47
Iowa	$15.94	Rhode Island	$11.48
Kansas	$19.85	South Carolina	$17.07
Kentucky	$16.70	South Dakota	$25.33
Louisiana	$16.98	Tennessee	$17.41
Maine	$18.69	Texas	$15.49
Maryland	$13.36	Utah	$15.12
Massachusetts	$9.83	Vermont	$20.13
Michigan	$15.27	Virginia	$14.13
Minnesota	$14.81	Washington	$13.37
Mississippi	$21.97	West Virginia	$19.25
Missouri	$18.32	Wisconsin	$15.94
		Wyoming	$25.11

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16238

August 8, 1996

In the Matter of
Implementation of the Local Competition Provisions in
the Telecommunications Act of 1996 (CC Docket No. 96-98)
and
Interconnection between Local Exchange Carriers and
Commercial Mobile Radio Service Providers (CC Docket No. 95-185)

Separate Statement of Chairman Reed E. Hundt

This order is the most pro-competitive action of government since the break-up of the Standard Oil Trust. I hope the whole country will join in common acknowledgement of all those who made this possible.

The private sector was ably represented, and provided us with much useful information and suggestions.

I specifically acknowledge and thank my colleagues, Commissioners Quello, Ness and Chong, and their staffs, all of whom contributed greatly throughout this process.

I would also especially thank Cheryl Parrino, President of the National Association of Regulatory Utility Commissioners. Her advice and counsel have been invaluable. Thanks also go to the two individuals who served as Chair of NARUC's Communications Committee during this period, Ken McClure and Lisa Rosenblum. I also thank the many other state commissioners from around the country who took time to discuss these matters with us, and who sent their staffs here for extended meetings on all these issues. I would also especially thank Chairman Dan Miller of the Illinois Commerce Committee who detailed one of his staff members, Augie Ros, to the FCC.

I owe a special debt of gratitude and respect to John Nakahata, my Senior Legal Adviser. John's brilliant, indefatigable, incisive and comprehensive work was essential to the triumph of analysis and policy that is in this order.

The highest commendations, however, go to the FCC staff, superbly led by Regina Keeney and Richard Metzger. I would like specifically to recognize each of the dedicated members of the Commission's staff who contributed to this effort, and I apologize if I have inadvertently omitted anyone:

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STATEMENT OF
COMMISSIONER JAMES H. QUELLO

August 8, 1996

Re: Interconnection Report and Order

Today marks the end of the pre-competitive era in local telephone service. By our vote today the Commission implements rules that will introduce competition into this last monopoly telecommunications market.

Our Report and Order refers to these rules as the first part of a trilogy that also includes future universal service and access charge reform. This is, to be sure, true. But I must confess that I also see today's action as not the first, but rather the third and final part, of a different trilogy -- one whose first two parts were the introduction of competition into the long-distance telephone market and the divestiture of the Bell Operating Companies from AT&T. These first two events made local telephone competition inevitable; today we usher it in.

Any Commissioner would be privileged to have served during one of these events. I have been lucky enough to have seen all three. From this perspective, then, I would offer several thoughts to the parties most immediately affected by today's decision.

First, to the public, I would say: unparalleled changes in the array of telecommunications services available to you, as well as in the companies that provide them, are going to occur. As competition proliferates and prices fall, economic growth will also occur, and that too will benefit all of us. This is the vision of the 1996 Act, and it is the goal of the rules we adopt today.

To those companies that seek to offer competitive local telephone service, I would say: the rules we adopt today attempt to provide the regulatory assistance you need to enter a market in which your competitor not only possesses a monopoly, but also controls the facilities upon which you must depend to compete. But even so, our rules are pro-competition, not pro-competitor. They are intended to make it possible for you to enter the market on fair and equitable terms, but not to so alter the market that entry occurs even where it otherwise might not. We have opened the door, but we have not paved the way.

To the wireless communications providers, I would say: we have heard and understand your concerns regarding the differences in your technical and market configurations and have, therefore, expressly reserved federal jurisdiction under Section 332. Nevertheless, it is important that our decisions implementing competition be technology-neutral and

provide an opportunity for negotiations under the comprehensive interconnection regime embodied by Congress in Section 251. We will presume good faith negotiations by all but stand ever vigilant to consider and resolve instances of discriminatory treatment.

To our state commission counterparts, I would say: with today's action, we effectively pass you the pen. It is now your responsibility to write the rules and set the prices and terms that will make Congress's vision of competition a reality. To provide added flexibility and to make this process administratively easier, we have also provided ranges of proxy prices that can be used until, or even instead of, state-specific rates are set. Our decision today borrows from and builds on the experience of those of you who are grappling with statewide competition issues. This has, in sum, been a collaborative process. It must continue to be a collaborative process if we are collectively to succeed.

To small telephone companies, I would say: our Report and Order relies largely on state commissions to implement the provisions of the law that ensure that competition will be introduced in a way that is sensitive to your unique circumstances. We cannot, and indeed would not want to, perpetuate what one small company has called a "reasonable, investment-backed expectation to hold competitive advantages over new market entrants." But while we will not guarantee your current profit margins, we are also confident that state decisions will assure that competition in your service areas will take hold in a reasonable manner.

To the Bell Operating Companies and other large independent local telcos, I would say: these rules will bring about competition. You will open your markets to competitors, and in return you will become competitors in other markets. The rules we adopt today will enable you to do both things. What they will not enable you to do is avoid the first, but obtain the second. These rules will bring change, not catastrophe; they will bring opportunity, not oblivion. It will be a different world, but one in which you will continue to play a vital role.

Finally, I must acknowledge that this day would not have come without the tireless dedication and tremendous talents of Gina Keeney and her gifted Common Carrier Bureau staff. The Chairman will, I am sure, commend each of you at length, and I will leave that privilege to him. For my part I want to express my thanks to the entire CCB "Dream Team," and especially to its captain, Richard Metzger. This job could literally not have been done this well in such short time without you, and for that you have my profound respect and appreciation.

August 8, 1996

SEPARATE STATEMENT
OF
COMMISSIONER SUSAN NESS

Re: Implementation of the Local Competition Provisions of the Telecommunications Act of 1996

Today we are fulfilling one of the most important responsibilities assigned to us by the Telecommunications Act of 1996 -- writing the rules that will achieve Congress's vision of fair and robust competition in all telecommunications markets. We are doing so with utmost fidelity to the letter and the spirit of the statute.

At the heart of the legislation is a bold commitment to supplant monopoly with competition. Based on the abundant benefits that have flowed to consumers as a result of competition in the provision of long distance services, information services, and customer-premises equipment, Congress decreed that the opportunity for competition be extended to the local telephone market. It ordered that barriers to entry be swept aside -- and that pathways to competitive entry be opened.

Sections 251 and 252 of the 1996 Act establish the foundation for this competition. On this foundation must be built radically different relationships than those that have previously existed -- between incumbent local exchange carriers and new entrants, between state and federal regulators, and between regulators and industry.

Congress recognizes that, to effectuate a new policy of local competition for markets that have traditionally been protected monopolies, a national policy framework is essential. But it also recognizes the need for flexibility. This balance is reflected in the 1996 Act, which sets forth the key principles in the statute, instructs this Commission to formulate implementing regulations, and assigns many of the duties pertaining to specific carriers and agreements to the state commissions.

At the same time, Congress encouraged voluntary negotiations between incumbent local exchange carriers and new entrants. Although voluntary agreements are not subject to Section 251 and our implementing regulations, we are aware that the negotiations may be influenced by the legislative and regulatory regime for arbitrated agreements. The "backdrop" of our rules should encourage, not impede, the successful negotiation of voluntary agreements.

The 1996 Act intends that the benefits of competition be available in all 50 states. not some lesser number. Congress recognized that some states were already making progress in the introduction of local competition, and it sought to permit that progress to continue. Consistent with the statute, the rules we promulgate today will enable those states in the vanguard to continue on their procompetitive course. Other states are being given the tools necessary to accelerate their progress. All states will have considerable responsibility for effectuating the transition to competition within their own borders.

Our decisions in this proceeding are the product of extensive discussions with state regulators concerning a wide variety of legal, economic, policy, and practical issues. The insights that have been shared with us by state regulators have guided us throughout our deliberations. Maintaining a successful partnership between state and federal regulators will be essential to fulfill the legislative expectations underlying the new structure set out in Sections 251 and 252 of the 1996 Act.

Out duty is to establish rules that are procompetition, not pro-competitor. Competitive access providers, cable companies, interexchange carriers, wireless companies, and others will all bring unique skills and strategies to the new competitive arena. Today's ruling, and the decisions that will follow from the state commissions, will enable all of these entities to compete robustly, and without hindrance based on other entities' entrenched market power.

In today's order, we are also facilitating new entry by identifying a core set of unbundled network elements that new entrants may obtain, singly or in combination, from incumbent LECs, to create new and innovative services. We send correct economic signals to potential entrants by requiring the use of forward-looking pricing principles. We promote voluntary negotiations by establishing minimal rules regarding the duty to bargain in good faith. We are providing immediate relief from CMRS-LEC interconnection agreements that violate fair play and flout our existing rules. In these and other respects, we act forcefully to bring to the local telephone market the dramatic change Congress intended.

Yet we also maintain fair treatment to the incumbent local exchange carriers. They are entitled to fair prices for the services and elements they offer, and our pricing principles accordingly reject costing methods that ignore the LECs' current network architecture or deny recovery of reasonable joint and common costs. The special needs of smaller incumbents, especially rural telcos, must be addressed with extra care, and just as Congress intended, we safeguard them today.

Some have expressed concern about the effect on universal service of flash-cut changes in market rules and pricing principles. We have listened -- and responded. With an abundance of caution, we have established an access charge transition of limited duration that will reduce the exposure of incumbent local exchange carriers to the sudden loss of access charge revenues. But we have also established for the long-term the principle that prices for network elements, transport and termination, and collocation must be based on costs -- not hidden subsidies that distort market forces.

We have committed to expeditious completion of the universal service proceeding, where we must make subsidies explicit and both eligibility and funding must become competitively neutral. On a parallel track, we must complete reform of access charges, to eliminate uneconomic incentives that distort investment decisions. A rational economic structure for all services and elements is vital to sustainable competition.

Only when the universal service, access reform, and interconnection rules are all in effect will local telephone subscribers really begin to see the full benefits of marketplace competition: lower prices, new services, and more choices. As market power wanes, the role of government will diminish as well.

Competition will take time to emerge. Expectations are high, but the reality will inevitably lag behind. As the process unfolds over the coming months and years, there are bound to be unforeseen circumstances, unintended consequences, and efforts to game the process. We will remain vigilant, and will reevaluate and refine our rules as necessary to promote competition that is both robust and fair.

Following the mandate of the Telecommunications Act of 1996, this Commission will not shrink from taking the steps necessary to enable the benefits of competition to reach consumers throughout the nation.

August 8, 1996

Separate Statement of

Commissioner Rachelle B. Chong

Re: In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98; Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers, CC Docket No. 95-185; Implementation of Sections 3(n) and 332 of the Communications Act, GN Docket No. 93-252.

The passage of the Telecommunications Act of 1996[1] marked the end of more than sixty years of monopoly style regulation. The changes wrought by the 1996 Act on the telephone industry are dramatic and comprehensive. I write separately to emphasize my strong belief that the pro-competitive path we have unanimously chosen in this interconnection order is the right one.

On the day the 1996 Act became law, the Commission embarked on a challenging journey to help implement the new statute. Our final destination has been clearly delineated by Congress. We are "to provide for a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition."[2]

True to this charge, we have resolved to act quickly and decisively to open all telecommunications markets to competition, to provide pricing methodologies that will drive rates toward cost, and to provide a national policy framework that will achieve this restructuring of the industry in an orderly and efficient manner. The rules in this item do not favor any particular industry or player over another, but instead free them from outdated regulatory restraints in order to compete with each other.

The 1996 Act opens up the local telephone network to competitors, and provides them with unprecedented access through an interconnection framework.[3] The Act provides three

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1 Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 *to be codified at* 47 U.S.C. §§ 151 *et. seq.* (1996 Act).

2 S. Conf. Rep. No. 104-230, 104th Cong., 2d Sess. 1 (1996).

3 Interconnection refers to the physical linking of two networks for the mutual exchange of traffic.

methods of entry through which a competitor may enter the local telephone market: (1) full facilities-based entry; (2) purchase of unbundled elements from the incumbent local exchange carrier (LEC), i.e. network "piece parts;" and (3) resale, which gives a competitor the ability to purchase an incumbent LEC's retail service at a wholesale price and repackage it for sale to the competitor's own end user.

Facilities-based Competition. The first entry option -- facilities-based competition -- represents the most dramatic departure from our current bottleneck monopoly structure. A full facilities-based competitor would offer a myriad of distinct services through separate facilities to its subscribers, and thus providing consumers with the benefits of head-to-head competition. As a practical matter, however, we do not expect a market typified by full-fledged facilities-based competition to blossom overnight. These networks or systems must be planned, financed and constructed over time. As a result, the other two entry avenues -- the purchase of unbundled elements and resale -- take on a special importance in the near term to bring swift competition to the local marketplace.

Unbundled Elements. Some new entrants already have some network infrastructure in place, and lack only a few critical components in order to provide local exchange service to consumers. For example, today's cable operators have a coaxial wire that passes over 96.6% of the TV households in America.[4] If a cable operator can access the remaining necessary network elements from the incumbent LEC, the cable operator would be only a step away from providing local telephone service over its upgraded network. This example points out why it is essential for new entrants to obtain access to those network piece parts. In our order, we set forth a minimum list of unbundled network elements that incumbent LECs uniformly must make available to new entrants upon request. The state commissions may expand upon this list. We believe that this action will give new entrants what they need so competition is "jump started."

Resale. Resale is another critically important entry strategy because three types of new entrants stand to benefit. First, facilities-based competitors that want to immediately enter the market prior to completing their own networks can use resale as a transition mechanism. Second, facilities-based competitors whose existing infrastructure does not overlap the incumbent LEC's service area, may choose to use resale to ensure that it can offer a competing local service package within the same service territory as the incumbent LEC. Third, new entrants who do not intend to offer facilities-based competition will be able to compete immediately in the local market by purchasing discounted services of the incumbent LEC. For all of these categories, our decision provides a viable avenue for immediate market entry.

Free Market Negotiations. I highlight that the 1996 Act has made the mechanism for entry a *free market* negotiation process between the incumbent LEC and any potential new

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[4] Paul Kagan Associates, Inc., *Marketing New Media*, Mar. 18, 1996.

competitor. Under Section 252(a)(1), the Commission's Section 251 rules play no role if an incumbent LEC and a new entrant reach a purely voluntary agreement, and the state commission approves it through the process set forth in Section 252.

Need for Minimum National Baselines. It is only if the carriers are unsuccessful in their voluntary negotiations that government steps in. The Act provides that the state commissions arbitrate the disputes. In today's order, we set forth a baseline of terms and conditions for an arbitrated interconnection agreement. I support this action for three reasons. First, because interconnection matters are very complex and technical, I believe that minimum national guidelines will help parties lower their transaction costs and will help drive them to reach their voluntary agreements much faster. At the outset of their voluntary negotiations, parties will understand what their minimum rights will be in a subsequent state commission arbitration process; it is our hope this may encourage earlier agreement.

Second, a baseline of terms and conditions simplifies the state commission arbitration process. A baseline enables a state commission to quickly approve an agreement and thus rapidly introduce competition. The presence of a baseline minimizes any regulatory delay that might result if a state commission were to establish from scratch its own pricing methodology or conduct a proceeding to identify network elements that must be unbundled.

Third, in establishing some national minimum baselines, we greatly aid new entrants who have national or regional strategies. Without such baselines, these competitors would face a "patchwork quilt" of differing state regulatory requirements that may create a potential entry barrier by increasing their entry costs and causing substantial delay. Thus, it is my view that these baselines promote swift competitive entry, which in turn will lead to the earlier introduction of competitive services to consumers.

Access Charge Transition. Although we take a great leap forward toward competition with this interconnection order, our goal in making local telephone competition a reality will not be complete until we finish universal service reform and restructure our current access charge regime. Our order notes that the Act sets forth a specific time frame by which the Commission must issue final rules as to interconnection (August 1996) and universal service reform (May 1997). Because of the time differential between these dates, and in order to avoid undue disruption of the incumbent LECs' ability to support universal service, I have supported our decision to require new entrants when purchasing unbundled elements to pay a portion of certain access charges until no later than June 30, 1997. My support for the establishment of a short term access charge transition scheme is premised on the Commission's firm commitment to complete universal service and access charge reform by the first half of 1997. I underscore my determination that the interim access charge mechanism proposed herein is of a finite duration. I can foresee no circumstance upon which it would be extended beyond the dates set forth in our order.

Pricing Methodology. Prices of interconnection and unbundled elements, along with prices for transport and termination and resale, are all crucial to any interconnection

agreement. Again, should the parties voluntarily agree on such prices, these agreements will be submitted to the states for approval and there is no government intervention in the process.

If carriers cannot agree, however, today's decision makes clear that the FCC will *not* set these prices. The Act provides that the appropriate state commission will step in to set prices. To help guide state commissions as they set prices according to local conditions, we have established methodological pricing principles that are consistent with the Act's cost-based pricing provisions. We have asked the state commissions to use the cost-based pricing methodology described in our order when they conduct an economic cost study to set their state specific rates. A clear benefit of this approach is that such a national framework will encourage the swift establishment of a common, pro-competition understanding of pricing principles among the states.

We also have established certain default proxies that states will use in the interim, if they have not completed a cost study during an arbitration, or if they lack the necessary resources to initiate their own cost study. It is my view that these default proxies, which are either price ceilings or price ranges, will greatly speed competition. For example, in a situation where the state commission has not yet completed a cost study but must render a decision on specific pricing issues in an arbitration pursuant to the deadline imposed by Section 252(e)(4), the default proxies will assist the state commission in resolving the pricing issues quickly and in a way consistent with the Act's cost-based pricing principles.

I emphasize that a state commission has the flexibility to set a specific rate that is either above or below the default proxy ceiling or range if it has conducted its own cost study consistent with the pricing methodology set forth in our order. The default proxy is only an interim mechanism and it may not be relied upon once a state commission has completed its own economic cost study.[5]

CMRS-LEC Interconnection Issues. In our order, I have supported our decision to allow CMRS-LEC interconnection matters to be governed by the Sections 251/252 provisions, while continuing to acknowledge our continuing jurisdiction pursuant to Section 332 over CMRS-LEC interconnection matters. In doing so, we have declined to opine on the precise extent of our Section 332 jurisdiction over CMRS-LEC interconnection matters, however. I emphasize that by opting to use the Section 251/252 framework, we are not repealing our Section 332 jurisdiction by implication or rejecting Section 332 as an alternative basis for jurisdiction.

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[5] It is unfortunate that we did not have enough of a record in this proceeding to decide what would be an appropriate proxy for paging carriers' termination costs or to set a default proxy. I am committed to moving forward with a further rulemaking proceeding on this issue as quickly as possible.

While we have generally crafted our interconnection rules not to favor any particular industry, player or technology over another, we cannot shut our eyes to inherent differences between some classes of carriers' services that may pose potential problems when we seek to apply our new interconnection rules. I believe that should the need arise in the future, we should not hesitate to adapt some of our general interconnection rules to recognize the unique nature of particular classes of service providers, such as CMRS providers. It is for this reason that I supported the Commission's decision to reserve its right to exercise jurisdiction over LEC-CMRS interconnection under Section 332.

There are several differences that set wireless CMRS providers apart from some of the other telecommunications carriers that will avail themselves of the Sections 251 and 252 interconnection framework. First, when adopting Section 332 in 1993, Congress created a national regulatory framework for CMRS providers, and granted the FCC authority to preempt states from entry and rate regulation. Congress made clear that its intent was to "foster the growth and development of mobile services that, by their nature, operate without regard to state lines as an integral part of the national telecommunications infrastructure."[6] This recognition that CMRS services are uniquely interstate in scope was apt. CMRS service areas, which are established federally, can encompass more than one state jurisdiction.[7] Congress was rightly concerned that imposing multiple state regulatory schemes on CMRS providers may prove unduly burdensome, cause delay, and otherwise inhibit the industry's growth. Notably, Congress did not repeal Section 332 when it provided new Sections 251 and 252 in the 1996 Act.

Second, CMRS providers have suffered past discrimination at the hand of the LECs and by certain state commissions with regard to interconnection matters. Today's record is replete with examples of LECs that have significantly overcharged CMRS providers for past interconnection. Further, in violation of our rules, our record reflects that in some cases, LECs have refused to pay CMRS providers for calls terminated by LECs on the CMRS networks, while other wireline carriers have received such compensation from the LECs. In

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[6] H.R. Report No. 103-11, 103rd Cong., 1st Sess. 260 (1993).

[7] For example, Personal Communications Service (PCS) providers in the Washington - Baltimore Major Trading Area (MTA) are subject to six jurisdictions -- Pennsylvania, Delaware, Maryland, Virginia, West Virginia and the District of Columbia -- due to the large size and location of the federally set service areas. Should one of these PCS providers need to arbitrate an interconnection agreement pursuant to Section 251 and 252, such PCS provider could be subjected to as many as *six* state arbitration proceedings. This scenario could impose undue burdens, such as increased transaction costs, regulatory delay, and the potential for inconsistent results, for CMRS providers with interstate service areas. For this reason, we reserve our right to in the future to use Section 332 as an alternative basis for jurisdiction over CMRS providers faced with this type of a dilemma.

other instances, LECs have required certain CMRS providers to pay for the traffic the LEC carrier originates and terminates on the systems of the CMRS provider. These problems have been compounded by certain state commissions who have limited access by CMRS providers to more reasonable interconnection rates afforded by LECs to other wireline carriers.

In this order, we have taken a variety of measures to remedy this discrimination and to ensure that CMRS providers are placed on an even footing with other telecommunications carriers when obtaining LEC interconnection. I am particularly pleased that we will allow CMRS providers with current interconnection agreements that provide for non-mutual compensation an opportunity to renegotiate those agreements under the framework of Sections 251/252, without incurring any early termination penalties. In light of the past discrimination CMRS providers have experienced, however, I would have taken two additional steps.

First, I would have extended the "fresh look" opportunity to all CMRS providers -- not just those with non-mutual compensation arrangements. Our decision was to limit relief in this instance to contracts that are clearly unlawful because they violate Section 20.11 of our rules. Section 20.11, however, requires not only that CMRS-LEC interconnection agreements comply with principles of mutual compensation, but also that each carrier pay *reasonable* compensation. I believe that the record in this proceeding clearly demonstrates that the rates the LECs have charged CMRS providers have far exceeded their costs and thus could not fairly be characterized as "reasonable" compensation.

Second, instead of requiring the CMRS providers to continue paying their current interconnection rates, I would have permitted CMRS providers to immediately begin paying the default proxy rate while their interconnection arrangements were being renegotiated.

It is my hope that on a going-forward basis, CMRS providers will be able to obtain fair, reasonable and non-discriminatory interconnection rates under the terms of today's decision. For reasons of simplicity and regulatory parity, it makes sense to me to have a single regulatory scheme pursuant to Sections 251 and 252 apply as to all incumbent LEC interconnection matters. Bearing in mind Congress' concerns about the interstate nature of the CMRS industry, however, I have concerns that the state-by-state arbitration process may pose undue burdens on, or otherwise hinder the growth of, the CMRS industry. If it does, I would not hesitate to invoke our Section 332 jurisdiction if I believe that the framework we impose today is having adverse impacts on the CMRS industry.

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